

RECOMMENDATIONS

FOR

“BRIGHT’S FAMILY PRACTICE.”

Recommendations from the Medical Faculty of the University of Louisville.

DEAR SIR:—Having bestowed on an attentive examination of your “FAMILY PRACTICE,” all the leisure I can command, I am of opinion that, with the addition of the word WELL, which I shall take the liberty of making, I cannot better characterize it than you have yourself done, in your very modest and appropriate title-page:—“*A Plain System of Medical Practice, well adapted to the Use of Families.*”

The work appears to me to be *thus* adapted, for the following reasons:

1. The matter it contains is sound and judicious, and sufficiently full and diversified for all the cases of disease, in which families should themselves attempt to employ it. When more is needed, recourse should be had to professional aid.

2. The descriptions of diseases are generally correct, and their changes and stages well marked; and the style of the work is so simple and perspicuous, that no one, at all acquainted with English composition, can misapprehend its meaning.

3. The compass of the work, embracing as it does every form of disease which an American physician, in full business, can expect to encounter in the practice of a lifetime, is abundantly ample.

Wishing it, therefore, the reception and circulation to which it appears to me to be entitled, I am, very respectfully, your obedient servant,

CH. CALDWELL, M.D.,

*Professor of the Institute of Medicine and Medical Jurisprudence,
Louisville, August, 1847. in the University of Louisville.*

P.S.—Were it not that comparisons are apt to be held exceptionable, I would not hesitate to say, that I consider your “FAMILY PRACTICE,” the most valuable work of the sort, of which I have any knowledge. C. C.

I have examined Dr. Bright’s “FAMILY PRACTICE,” and feel assured that it is, on the whole, well adapted to the purposes for which it was written. I think the work is calculated to be eminently useful.

August, 1847.

S. D. GROSS, M.D., *Prof. Surgery.*

concur in the estimate expressed above by Dr. Gross. H. MILLER, M.D.,
Professor of Obstetrics and Diseases of Women and Children.

I have examined “BRIGHT’S FAMILY PRACTICE” with some care, and find that it is plainly written, and contains much that is valuable. I believe the work is calculated to do much good,

J. COBB, M.D., *Professor of Anatomy.*

I have examined Dr. Bright’s “FAMILY PRACTICE,” and find it what it purports to be, a plain system of Medical Practice, which I can conscientiously recommend to families.

L. P. YANDELL, M.D.,

Professor of Chemistry and Pharmacy.

FROM PRACTISING PHYSICIANS IN LOUISVILLE.

From the Author of *Gunn’s Domestic Medicines.*

I have examined with care Dr. Bright’s “FAMILY PRACTICE,” and find it a valuable work, well suited to the use of Planters and Families. It is plain and comprehensive, and the treatment conformable to the latest and most approved practice, and it affords me much pleasure to recommend it to the public.

J. C. GUNN, M.D.

RECOMMENDATIONS.

I have examined "BRIGHT'S FAMILY PRACTICE." The work is not only the result of long experience, but a very judicious selection of the latest and most approved Medical authors, and will no doubt be of great service to families.

W. C. GALT, M.D.

I have examined "BRIGHT'S FAMILY PRACTICE," and do most unhesitatingly recommend it as a plain, practical work—useful to families.

C. PIRTLE, M.D.

I have examined "BRIGHT'S FAMILY PRACTICE," and take great pleasure in recommending it as a valuable work, suitable to the use of Families. Having practised Medicine fifteen years in Mississippi and Louisiana, I view this work as better adapted to the diseases of that region than any work of the kind I have ever seen.

RICHARD ANGEL, M.D.

We have examined with care Dr. Bright's "FAMILY PRACTICE," and feel no hesitation in recommending it to the public, as a book containing a variety of useful and valuable information. It is entirely practical in its design, all technicalities are avoided, so as to render the Author's meaning clear and plain to the unprofessional reader, for whom it is more particularly intended than for the profession; though the latter, and particularly the Medical student, might increase his store of practical knowledge by a careful perusal of its pages. Dr. Bright's instruments for the application of caustic to the mouth and neck of the uterus are ingenious, and no doubt, will save the practitioner much trouble, and the patient a great deal of unnecessary pain.

U. E. EWING, M.D.,

W. T. H. WINLOCK, M.D.

Louisville, June 17, 1847.

I have examined "BRIGHT'S FAMILY PRACTICE," and find in it plain and important practical principles in medicine, well adapted to the use of Families. Louisville, June, 1847.

WM. A. McDOWELL, M.D.

I have examined "BRIGHT'S FAMILY PRACTICE," and take pleasure in recommending it to all persons as a valuable work—in particular to families in the country. Louisville, June, 1847.

J. W. KNIGHT, M.D.

We have examined the medical work written by Dr. J. W. Bright, and take pleasure in recommending it to the public, as a work well calculated for the use of Families.

JOHN M. TALBOT, M.D.,

H. M. WAKEFIELD, M.D.

Louisville, June, 17, 1847.

FROM PHYSICIANS IN MEMPHIS.

After a careful examination of Dr. Bright's "FAMILY PRACTICE," I have no hesitation in saying, that the practical precepts, recommended by the Author, are better adapted to the treatment of disease, as it prevails at the South-West, than are those of any other work, of a similar character, with which I am acquainted.

GEO. R. GRANT, M.D.,

Professor of Theory and Practice of Medicine, Memphis Medical College.

From the cursory examination which I have been enabled to make of Dr. Bright's Work on the Practice of Physic, I have no hesitation in saying that it is the best production of the kind now published.

Memphis, Sept. 2, 1847.

E. F. WATKINS, M.D.

We have examined Dr. Bright's "PLAIN SYSTEM OF MEDICAL PRACTICE," and are satisfied that it is better calculated for a safe guide to Families—and especially those remote from a scientific Physician—than any other work of Domestic Practice. We can, therefore, cheerfully recommend it as a plain and valuable work; in the main, well adapted to the purposes designed.

Memphis, Sept. 1, 1847.

LEWIS SHANKS, M.D.

JNO. R. FRAYSER, M.D.

BRIGHT'S FAMILY PRACTICE.

This work embraces all the diseases of MEN, WOMEN, AND CHILDREN; and a plain system of midwifery, and is the only work now before the public which contains all the new and approved remedies found in the standard works and medical periodicals of Europe and America, together with the experience and approved practice of the best authors, upon which the successful treatment of the present forms of disease so much depends. It is the only work now before the public containing a full description of all the new as well as the old diseases of the United States. The symptoms of each disease, in all its stages, are so minutely described, and the directions for giving and working off the medicines are so plain, that no one can fail to follow them; the remedies all being put down in their appropriate place in plain English. It also contains a Family MATERIA MEDICA, with receipts for preparing all the family medicines in common use, with directions how to use them; and about thirty plates, mostly of medical plants, with their descriptions, medical properties, and uses. Recipes for preparing tooth powders, cologne water, and medicines for cleansing and beautifying the skin, and many other receipts, useful to farmers, and mechanics. Recipes for preparing and using the remedies for the cure of the poisons of Arsenic, Copper, Lead, Mercury, Opium, Morphine, Galicand, Prussic Acid; also, directions for preparing a variety of diet for the sick. The whole work is got up in the neatest and most fashionable style, and contained in 941 royal octavo pages. Every family should have a copy of this valuable work.—*Nashville Christian Advocate, Tennessee, February, 1849.*

PLAIN SYSTEM OF MEDICAL PRACTICE ADAPTED TO
THE USE OF FAMILIES; BY JOHN W. BRIGHT, M. D.

The above is the title of a large octavo volume, of nearly a thousand pages, well bound and neatly executed. It treats of the theory and practice of Medicine, Physiology, Obstetrics, Materia Medica, and Botany, in a style easy of comprehension; and may be of infinite value to those who cannot readily avail themselves of medical aid. The author is entitled to high distinction in his profession, and the work goes out to the world with the sanction of many distinguished names.

Methodist Expositor and True Issue, Cincinnati, March, 1849.

A Plain System of Medical Practice, adapted to the use of Families.
By John W. Bright, M. D., Louisville. Published by Morton and Griswold, for the Author.

It is not intended by its author to supersede the necessity of a medical adviser, but only to give such hints as will enable families to

treat ordinary diseases with the usual remedies, and to have some guide when they are out of the reach of medical advice. All technical phrases are laid aside, and the prescriptions are so written as to be understood by the unlearned reader. The symptoms of the various diseases are so described as to be readily comprehended by all. We feel the greater confidence in recommending the work, from observing that it is commended to the public by some of the most eminent of the Medical Faculty in this and other cities. Among these commendations, we notice the names of Drs. Caldwell, Gross, Miller, Cobb, and Yandel, of the Louisville Medical Institute, and Drs. Ewing, Winlock, McDowell, Talbott, Knight, and others of this city; together with those of Drs. Grant, Watkins, Shanks, and Frazer, of Memphis. We take it for granted, that these gentlemen would not suffer their names to go forth as sanctioning a medical work which is not every way worthy of public reliance.—*The Presbyterian Herald, Louisville, Ky., March, 1849.*

BRIGHT'S FAMILY PRACTICE.

The foregoing is the title of a large and substantially bound work, recently issued from the press of Messrs. Morton and Griswold, of this city. John W. Bright, M. D., of this city, is the author of the work. It is an octavo of 928 pages, in which the author has labored to describe all the diseases incident to the United States, and to prescribe the most approved remedies, in conformity with the latest discoveries and improvements of the profession. His definitions of diseases, and his prescriptions are given in plain and intelligent language divested of professional technicalities, suited to the capacities of the common reader; and his prescriptions immediately follow the definition of each case of disease, and each change or variety of the various diseases of which he treats, so that the intelligent householder can in a short space, learn the distinguishing symptoms of any disease, and the appropriate remedies, adapted to each stage or variety in its progress. The work has a treatise on *Materia Medica* appended to it, which adds much to its value.

The work is recommended by several of the Professors of the Medical College, and a number of the practising physicians of this city, and in other parts of the country. We doubt not that many of our readers would be glad to possess themselves of such an assistant in the treatment of diseases, and especially where skillful physicians cannot be obtained.
Baptist Banner, Louisville, Ky., February, 1849.

A Plain System of Medical Practice, adapted to the Use of Families. By JOHN W. BRIGHT, M. D., Louisville, Ky. (Published by Morton & Griswold for the Author.)

This is the title of a large and beautifully printed and bound royal octavo volume of 941 pages. It is a sound, clear, and able production; a book, we may say the very book, needed for these times; and we are fully persuaded that it will be found eminently useful. The Author, in a manner highly creditable to himself, has performed his task, and redeemed his promise in the preface, to make it acceptable to the community at large, by carefully avoiding, as much as possible, the technicalities of his profession. It is destined, as a friendly visitor, to enter many a family, and bring comfort to many who are suffering from the common calamities of life. This work is highly recommended by the very first physicians, and indorsed by them as every way worthy of universal confidence.—*Quarterly Review, Methodist Episcopal Church South, April 1848, p. 323*

A
PLAIN SYSTEM
OF
MEDICAL PRACTICE,
ADAPTED TO
THE USE OF FAMILIES.

BY
JOHN W. BRIGHT, M.D.

LOUISVILLE, KY.:
PUBLISHED BY MORTON & GRISWOLD,
FOR THE AUTHOR

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1847

UNITED STATES OF AMERICA, { SS
DISTRICT OF KENTUCKY,



L. S.

Be it remembered, that on this 14th day of January 1847, John W
Bright, of said District, deposited in this office the title of a Book,
which is in the words and figures following, to wit:

"A Plain System of Medical Practice, adapted to the use of Families. By
John W. Bright, M. D."

The right whereof he claims as proprietor, in conformity with an Act entitled "An
Act to amend the several Acts respecting Copy rights"

A copy att.

NO. H. HANNA, Clerk,
District of Kentucky.

~~~~~  
MORTON & GRISWOLD,  
Stereotypers and Printers. Louisville



## P R E F A C E

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THE author of this work, having been engaged in an extensive practice of medicine for more than thirty years, is fully apprized of the difficulties attendant upon so writing a work that the unprofessional reader may easily comprehend the description given of diseases, and the use of the remedies prescribed. In composing, compiling and arranging this work, he has consequently avoided the technicalities of the profession, and freely availed himself of the knowledge he has derived from the standard authors, both of Europe and America. New diseases are yearly presenting themselves, as new causes are developed; therefore, new remedies are necessary for their cure. These new remedies, as given by the most approved practitioners, as well as those in former use, have been carefully selected, and applied to the cure of diseases, both new and old, to which the inhabitants of the United States are subject; thereby giving to this work advantages over any other now before the public. All the diseases incidental to the United States are carefully described.

The work also contains a plain, practical treatise on midwifery; and directions for nursing, and preparing diet for the sick. All speculation has been carefully avoided, while the remote and proximate symptoms of each disease have been described in the plainest manner, each stage properly defined, and the appropriate remedies given in plain English, with directions how to compound, prepare and administer them at the proper time and stage of the disease. The symptoms are then

described according to the effect the medicine may have had, and further prescriptions made, so that the attentive reader cannot fail to administer the appropriate remedies throughout the process of the cure.

This work is rendered still more valuable to families by the addition of a Family Materia Medica, which is illustrated by thirty-one engravings, twenty-two of them plates of medicinal plants, with their descriptions and uses. It contains, also, a formulary for preparing all the family medicines in common use, and a list of the antidotes, with directions how to prepare and use them, for the cure of the following poisons, namely—*Arsenic, Prussic Acid, Lead, Copper, Mercury, Opium, Morphine, and Gallic Acid.* In addition to this, will be found recipes for making Colognes, Tooth Powders and Cosmetics, with a number of others useful to families and farmers.

Taking the whole work together, the author is fully satisfied that it is well adapted to the wants of the public, in a medical and practical point of view. Many of the new remedies contained therein have been collected from the most approved medical periodicals and journals of England, Ireland, Scotland, France, Germany and America, many of them not having as yet been introduced into systematic works written for the profession; but their virtues and properties having been satisfactorily established by physicians of the highest standing in the profession, they are herein given to the public.



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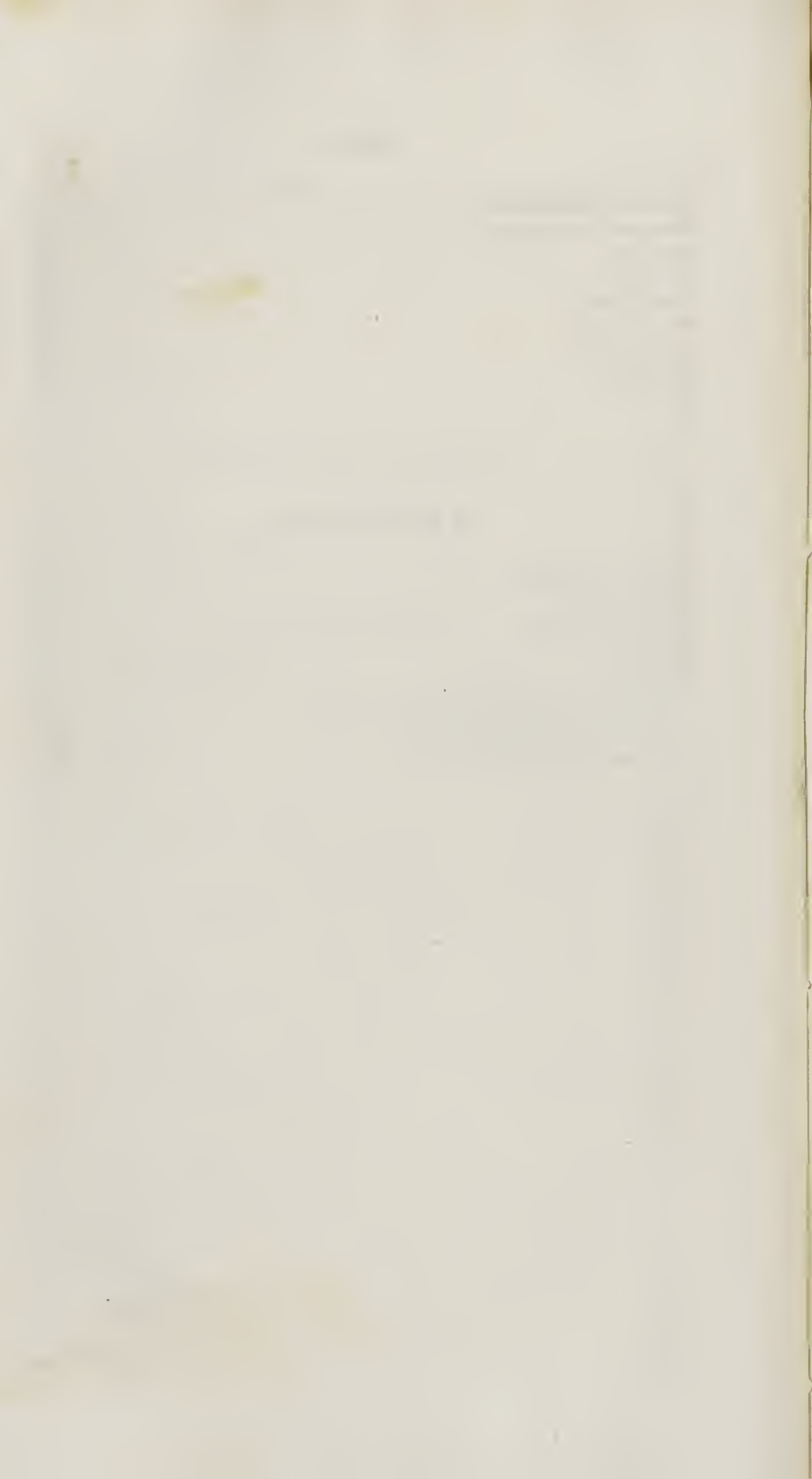
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# MEDICAL PRACTICE.

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## INTERMITTENT FEVER, OR AGUE AND FEVER.

DISEASES which are not complicated with any local affection that is essential to and belongs permanently to them, as those which belong to other diseases as of a febrile character, are, more strictly speaking, called fevers. Fevers are properly divided into genera and species. There are certain symptoms which are common to all the diseases comprehended under the class *fevers*; but we shall here particularly confine ourselves to the description of intermittent fever. The symptoms to be observed in intermittent fever are the following: The person is first attacked with languor or debility, sluggishness in motion, and some uneasiness in taking exercise, with a disposition to yawn and stretch; at the same time the face and extremities become pale, the nails turn blue, the features shrink, and the surface of the body becomes rough, like the skin of a goose;—hence the term goose-skin. The surface of the body becomes contracted, as if it had been exposed to cold. At the coming on of these symptoms, some coldness of the feet and hands may be detected by another person, though it may not be noticed by the one affected. The cold sensations are first felt in the back, from whence they pass over the whole body, increasing, with frequent rigors, until the person begins to shake, as if exposed to the chilling blast of a winter's day, though it may be in the heat of summer. After these rigors or shivering sensations have lasted for an indefinite time,—from ten minutes to two hours,—they begin to abate, and are alternated with warm flushes, and by degrees yield entirely to an increase of heat, which augments till a fever has entirely taken the place of the cold stage. The heat now pervades the whole system. The natural appearance of the skin returns, with an increased redness in the face. The surface is dry and smooth, and the features look a little more full than

natural. The heat continues, with more or less pain in the back and head, and sometimes in the legs and thighs. After the fever has continued for several hours, more or less, with thirst and restlessness, a gentle perspiration begins to make its appearance; first on the forehead, from whence it gradually extends over the whole system more or less profusely. As the perspiration continues to flow, the heat, thirst and pain abate; after some time the perspiration gradually abates also, and the body assumes its natural temperature. Most of the functions of the body which were suspended during the cold and hot stages, are now restored to their natural state. The appearances presented in the above description of intermittent fever, give us a natural division of the disease into three stages. In the course of the fulfilment of the above stages, several symptoms appear, which it is important to notice; and many changes take place in several of the important functions, which must also be observed. Upon the first approach of the attack, during the feeling of languor and lassitude, the pulse is always lower and weaker than in health. As the chill increases, the pulse continues to become weaker till they are small, feeble, and very frequent, and sometimes irregular. At this stage of the disease, there is occasionally pain in the stomach, and sometimes nausea and vomiting of bilious matter. As the cold stage passes off and the fever rises, the sickness at the stomach abates, and the pulse becomes fuller and stronger, and gradually continues to increase in strength, till the fever begins to abate, and the sweat to break out. As the sweating becomes more general, the pulse grows softer and less frequent till the sweat ceases, by which time the fever has entirely subsided, and the pulse returned to its healthy standard. The breathing during the cold stage is short, frequent and anxious, and a tickling cough sometimes troubles the patient during the chill. As the hot stage comes on, the cough subsides, and the respiration becomes more free, full and easy, but still continues somewhat frequent and anxious till the sweat breaks out, when it subsides. With the increase of perspiration, the pain leaves the head, back and extremities, and the breathing returns to a healthy state.

*Of the natural functions.* Upon the appearance of the cold stage, the appetite fails, and does not return till the sweating stage is over, or at least till it continues for some time. The thirst that occurs during the cold stage is owing to the suspension of the secretions in the fauces and palate, and the conse-



quent dryness of those organs. But it is continued in the hot stage, in consequence of the increased heat in those parts, and is only relieved by the ushering in of the sweat, when a more comfortable feeling of quietude to the whole body is experienced. In the course of the cold stage, the person generally voids a quantity of colorless urine, which deposits no sediment. In the hot stage, the urine is less in quantity and high-colored, but still deposits no sediment. But in the sweating stage, the urine deposits more or less sediment, which is white, yellow or reddish; and this sediment continues to be deposited for some time after the paroxysm is over, unless there is a tendency to diarrhœa. No stools are voided till the sweating stage has progressed for some time; then they are inclined to laxity. If there are tumors or swellings in any part of the body, they are apt to shrink during the cold stage; but they return to their natural size, or larger, during the hot stage. Ulcers cease to discharge during the cold stage, but discharge again during the hot stage. The mental organs are frequently affected during the cold stage, thought being confused, and sensation rather blunted and sometimes considerably impaired, for the time being. But when the hot stage comes on, all these return with considerably increased power, and delirium is frequently the consequence. There are some cases in which the cold is ushered in with a deep, heavy drowsiness and stupor, and becomes almost comatose approaching to apoplexy. The pain in the head, that attends the cold stage, does not always proceed so far as above described; but pain in the head rarely fails to attend the fever, and generally continues till the sweat flows freely, when it gradually subsides, and the pain in the back and limbs subsides also. These are the principal symptoms, with the order of succession in which they ordinarily appear, in a paroxysm of intermittent fever, or ague and fever. But all those symptoms will not be found in every case, nor in every patient; at least, the violence of the paroxysms will vary in different persons according to age, constitution and habits. But there will always be a sufficient number of these symptoms in every case to characterize the disease, so that its true classification cannot be easily misunderstood. It is seldom that a fever of the above type ceases at the first paroxysm; that is, it seldom runs through all these stages without returning, unless arrested by medicine. It most frequently, after a certain length of time has elapsed, is again ushered in by a second paroxysm, passing through all the above stages, often

continuing to alternate for several days, weeks or months, unless broken by medical treatment. The intermission in fever is the length of time which elapses from the time the sweating stage commences till the fever passes off and the next chill commences; and the interval in fever is the time between the end of the sweating stage and the commencement of the next chill. When the chill returns every day, the fever is said to be of the *quotidian type*; when it returns once in forty-eight hours, it is called the *tertian type*; when the chill returns once in three days, it is called the *quartan type* of intermittent fever; in other words, we have the every day ague, the every other day ague, and the third day ague. Sometimes the chill returns at irregular periods, but they are only variations of the above types, produced by occasional circumstances. There is another thing to be observed in relation to the above forms of fever, and that is, the longer the chill lasts the shorter the paroxysm of fever will be. As a general rule, the every day ague, or the quotidian type, has the shortest chill and the longest fever. The tertian type, or every other day ague, has a longer chill and shorter fever than the every day ague. And the quartan type, or third day ague, has the longest chill and shortest fever of any other. As a general rule, if the chill lasts fifteen or twenty minutes, the fever will last six or eight hours, and the sweating stage two hours. If the chill lasts one hour, the fever will last from four to six hours; and if the chill lasts two or three hours, the fever will not exceed that length of time. We shall now speak of the treatment of the different types of intermittent fever.

#### TREATMENT OF THE QUOTIDIAN TYPE.

The cold stage is the first thing that attracts our attention in intermittent fever. The remedies to be used in this stage, are such as are calculated to remove the coldness and restore an equable warmth over the surface; for during the chill, the blood recedes from the surface, and accumulates in the heart and large blood vessels internally. The remedies indicated in the chill are those that are calculated to establish a more uniform circulation throughout the system, such as warm teas of balm, hyssop, sage, thyme, dittany, camomile, pennyroyal, &c. Those teas that are not very stimulating are best, because stimulants raise the fever higher when the reaction takes place. Bottles of hot water applied to the back and extremities, will aid in shortening

the chill. When bottles cannot be obtained, hot rocks or bricks, dampened and wrapped in cloth, may be applied. The above remedies are proper where you have no medicine at hand; and if the fever should be ushered in before you can get medicine, give an inema (injection) of salt and water, either warm or cold, to evacuate the bowels freely, which will lighten the fever. As soon as it can be procured, an emetic should be given

*Recipe:* Ipecac, twenty grains.  
Tartar Emetic, three grains.

Mix, and dissolve in nine table spoonfuls of warm water. Give three first, and one every fifteen minutes, till free puking is induced. Then give a glass of warm water every time the patient pukes, till he has three or four motions up; then give gruel to work it downwards. Give nothing cold till the operation is over. But if the bowels should not be freely evacuated in two hours, give the following pills:

*Recipe:* Calomel, twenty grains  
Rhubarb, ten grains.  
Aloes, ten grains.

Form six pills. Give three first, and the other three in two hours. Work them off with gruel without salt. Toast water or herb tea may be taken during the operation. If the fever continues after the operation of the pills, give

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.

Mix, and divide into six powders. Give one powder every four, in warm balm tea, till the fever subsides. Then, if you have six hours before the chill should return, counting from the hour the chill came on the day before, give the following pills:

*Recipe:* Aloes, twenty grains.  
Quinine, ten grains.  
Piperine, two grains.

Form ten pills. Give one every half hour till the time for the chill has past. But if the chill occurs before enough of the pills have been taken to keep it off, as soon as the nails become blue and a theatchy feeling is felt, repeat the emetic immediately, so that it shall commence operating just as the chill commences. This will break the chill, and but little fever will follow. As soon as the fever is off, commence the tonic pills again, and give them as above directed, as long as the intermission lasts. In a majority of cases, you will remove the chill and fever on the second day. But there are persons who cannot take an emetic of any

description, in consequence of its cramping them, or from extreme debility, or pregnancy, or bleeding lungs, &c. In such cases. the purgative course of treatment must be pursued; and in these cases it is generally most expedient to give the cathartic in broken doses, as the pills above prescribed, which may be taken two at a time, and repeated every two hours till they operate freely. During the administration of the pills, if the fever should be high, twenty drops of the sweet spirits of nitre may be given every hour, and a little herb tea, to mitigate the fever; and as soon as the fever is off, the tonic pills may be given as above directed. But there are cases where calomel should not be given; they are those where the patient has been salivated repeatedly and severely; in all such cases, emetics should be administered, followed with these pills:

*Recipe:* Aloes, ten grains.  
Rhubarb, ten grains.  
Scammonia, ten grains.  
Ground Ginger, ten grains.  
Tartar Emetic, one grain.

Form eight pills. Give one every hour till they operate freely. After the operation is over and the fever subsides, give the following mixture: Make half a pint of strong senna tea, and dissolve in it three grains of the sulphate of quinine; give a table spoonful every half hour till all is taken. This may be repeated every day in the intermission of fever, till the chill is broken. If the patient cannot take quinine, in consequence of its affecting the head, as it does with some patients, then use the following:

*Recipe:* Salicine, thirty grains.  
Piperine, two grains.

Dissolve them in two ounces of water, — (grind the piperine fine,) — and take two tea spoonfuls in sweetened water every hour during the intermission of the fever. In order to prevent the chills returning after they have been broken, take

*Recipe:* Peruvian Bark, one ounce.  
Gentian Root, half ounce.  
Orange Peel, half ounce.  
Cloves, thirty or forty heads.

Make all fine, and put them into a quart of spirits. Take a table spoonful every morning in water. When these articles cannot be obtained, take the following:

*Recipe:* Yellow Poplar Bark, one ounce.  
Dogwood Bark, one ounce.  
Wild Cherry Bark, one ounce.  
Cream Tartar, one ounce



Make all fine, prepare and use as above. In some cases, the chill will return every week or two, for months. In such case, a very popular remedy, and not a bad one, will be found as follows: Take one gallon of hard cider, and boil it down to one pint; add to it a handful of horseradish root, cut fine. Take a table spoonful of this three or four times a day. This has often broken the chain of regular returns of the chill, and cured the patient. Another popular remedy is the juice of a large lemon squeezed into a cup of strong coffee, and taken warm just before the chill comes on. I have found the following to be an excellent remedy to prevent the return of chills :

*Recipe* : Bark of the root of the Ptelea, one ounce  
 Root of Yellow Gentian, one ounce.  
 Root of the Spiræa, two drachms.

Make all fine, and put into a pint of brandy or strong whisky. Take a table spoonful three times a day. In all cases, the pores of the skin must be kept open by a bath of warm water, and soap freely applied once a week, and the bowels kept free and easy by some gentle purgative, such as *castor-oil*, *rhubarb*, extract of the white walnut bark, &c., till the cure is confirmed. Bathing the extremities in cool vinegar and water, when the fever is on, will always be admissible. The diet should be light and thin; no animal food should be taken; tea, soft toast, gruel or light soups, rice, roasted potatoes, &c. When there is neither calomel nor tartar in the system, the drink should be cold water. The chamber of the sick should in all cases be well ventilated. The discharges should be removed as soon as they are voided. There are various other modes of treating ague and fever. One is this: After the stomach has been cleansed properly, as soon as the fever comes on, strip the patient and wrap him in a wet sheet from head to foot, and cover him in bed; he will sweat profusely, and the fever will soon subside. Then give him the tonics above directed. Others plunge the patient into a cold bath while the chill is on, but I consider this a dangerous practice. Another mode is to bleed the patient in the chill. This never should be done but by a judicious practitioner—a physician of experience. The two last remedies have had their strong advocates in physicians of great celebrity, but they can only be resorted to in the hands of such physicians, and not in the domestic practice.

We now proceed to give the treatment of the tertian type of ague.

## TREATMENT OF THE TERTIAN TYPE.

The chill in this type of intermittent fever returns once in forty-eight hours. Here, if the fever is of short duration, you have double the time in which to perform the cure. It should be commenced exactly like the treatment of the *quotidian type*, by giving an emetic just as the chill comes on, and follow it with the purgative, and when free from fever, give the quinine and piperine pills; or you may give the *senna tea* and *quinine*, or the *salicine* and *piperine*, as directed in the *quartian type*. Only once in an hour will be often enough to give the tonic in this form of the disease. After the chill ceases to return, give the bitters, to secure him from a relapse.

## TREATMENT OF THE QUOTIDIAN TYPE.

This type of the ague can be cured in the same way. But here you still have more time in which to arrest the chill, and your remedies will be more certain to produce the desired effect. The course of treatment need not differ from that in the other types. All the above cases are supposed to be simple in their nature, and not of long standing. But ague may commence in the *quotidian type*, that is, the chill may return every day, and continue to do so for some time. Then it may recur every other day, for a time, and then only once in three days, thus passing through all the types of this form of fever, so that by the time it has assumed the type of the third day ague, the energies of the system have been so much reduced, and the resolution of the patient so broken down, that he has scarcely energy enough to escape from dangers seen, or take any exercise whatever. By this time, he looks pale and emaciated, his abdomen has become enlarged, and his spleen large and hard,—(this is called *ague cake*,)—his liver, has suffered in its functional powers, if it is not actually diseased. His stools are light clay-colored, his feet and ankles swollen, his appetite precarious—sometimes voracious and sometimes he has none. The tongue is generally covered with a white coat, especially in the morning. If he can be permitted to lie down in the sunshine he is for the most part satisfied. In such cases, we must pursue a different course of treatment. The system is now more or less *cachectic*; none of the secreting organs perform their functions in a healthy manner. The first effort in such cases should be to restore a healthy action in the secreting organs—the liver, the pancreatic gland

the mesenteric glands and the kidneys. We should commence the cure, in such cases, by giving an emetic of ipecac alone.

*Recipe* : Pulv. ipecac, thirty grains.

Dissolve in a tea cupful of warm water, and give it at three draughts, fifteen minutes apart; work it off in the usual way. It should be followed by the following pills :

*Recipe* : Blue Mass, thirty grains.  
Rhubarb, thirty grains.

Form twelve pills. Give two every two hours till they operate freely. They should be repeated every day for two or three days, or until healthy bile is discharged. As soon as this is effected, the following medicine should be given :

*Recipe* : Nitric Acid, half an ounce.  
Muriatic Acid, half an ounce.

Mix them together. Give ten drops three times a day, in cold water. At the same time apply the following ointment over the region of the spleen, by friction with the fingers. A portion as large as a hazle-nut may be rubbed in three times a day :

*Recipe* : Hydriodate Potash, two drachms.  
Rancid Lard, two ounces.

Pulverize the hydriodate potash, then add the lard. Mix them properly, and apply as above directed. If the liver should not act well, or the bowels be torpid under the use of these remedies, omit the drops for a day or two, and give the pills of blue mass and rhubarb, as above directed; continue the use of them again till the bile is freely secreted. You may then omit them and again resume the use of the acid. If the liver and spleen continue to be enlarged, and the stomach tender to the touch, omit the acid and give the following pill :

*Recipe* : Calomel, twenty grains.  
Opium, two grains.

Form twenty pills. Give one of these pills three times a day, till the gums become a little swollen and the saliva is secreted more freely than usual. These pills should then be omitted, and the following pills given to keep the bowels open :

*Recipe* : Rhubarb, sixty grains.  
Aloes, thirty grains.  
Castile Soap, thirty grains.

Form twenty-five pills; three or four of these, taken at bedtime, will operate once or twice in the morning. In order to give tone to the system the following bitters may be taken :



*Recipe* : Cherry Bark, one ounce.  
Dogwood Bark, one ounce.

Macerate the bark in half a gallon of cold water. Take a wine-glass of this infusion three times a day. If the chills continue, even in a slight degree, give the following pill :

*Recipe* . Aloes, ten grains.  
Quinine, ten grains.  
Piperine, two grains.

Form ten pills. Give one three times a day ; this course should be pursued for several days, or even weeks, till the chill and fever ceases to return, and the enlargement of the liver and spleen is removed. If the skin should continue to be dry, and the bowels inactive, use the following foot-bath :

*Recipe* : Nitric Acid, four ounces.  
Muriatic Acid, four ounces.

Mix. To two gallons of warm water add one table spoonful of the mixture. Place the feet and legs into the water, and let them remain till a tingling sensation is produced in the skin ; this will be effected in fifteen or twenty minutes. The bath should be repeated every night for a week or two ; in the morning the body should be sponged all over with cold water, or the shower-bath may be taken and the surface immediately rubbed dry with a coarse towel ; and as soon as the apparel can be adjusted, the patient should exercise briskly till a free perspiration is induced. This should all be accomplished before breakfast. The practice may be continued till the health is restored. Exercise on horseback will be good for the convalescent. Exposure to rain or damp should be avoided. The diet should at all times be that which sits easy on the stomach, avoiding everything that acidulates, or is difficult of digestion. Spirituous liquors, either distilled or fermented, for the most part, do more harm than good, unless some bitter be infused in it, and then it may be taken as a tonic.

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## REMITTENT OR BILIOUS FEVER.

THIS is the common bilious fever of the Middle and Western States. The paroxysm of a simple intermittent fever is always completed in less than twenty-four hours. But in *remittent fever*, though the sweating stage comes on before twenty-four hours have elapsed, yet there remains some fever when the cold stage

sets in again, when the paroxysm runs the same course as before. The pain in the head and back is increased on the recurrence or increase of the fever. When the remission is so distinct as to be clearly defined, and the return of a new paroxysm is distinctly marked by the cold stage, though there be no shake, but only a chilly sensation in the extremities, and perhaps some cold creeping up the back, the type of the fever is strictly remittent. It is not an uncommon thing for intermittent, or ague and fever, in hot climates, to change its type to that of remittent or bilious fever. When this is about to take place, the hot stage is protracted a little every day, and the sweating stage correspondingly shortened, till at length the hot stage does not pass off entirely till the chilliness is felt again, which lasts but a short time, when the fever rises with more violence than before. In these cases, the tongue is covered with a white, yellow, or brownish coat. If the coat is white, the tongue is apt to be more or less swollen, and look pulpy, with indentations in its edge, made by the pressure against the teeth. There is an unpleasant taste in the mouth. The pulse is full and strong, and beats from ninety to a hundred strokes in a minute. The skin is dry and hot, with great thirst. There is frequently great pain in the head; the eyes are streaked with red. A quick motion of the head increases the pain. The back suffers with pain, and a general restless feeling pervades the lower extremities. The stomach sometimes loathes all food, but craves acid and cooling drinks. The bowels are apt to be constipated, and the urine scant and high-colored.

#### TREATMENT.

If the treatment of this fever is commenced when the fever is high, take a pint or more of blood from a large orifice, letting it run till a perspiration breaks out upon the face and arms. As soon as the blood is drawn, give an emetic, as prescribed in intermittent fever; and follow it with a brisk purgative:

*Recipe:* Calomel, twenty grains.  
Rhubarb, ten grains.  
Aloes, ten grains.

Form six pills. Give three first, and the other three in two hours. At the same time, if the fever is nigh, give the following mixture:

*Recipe:* Sweet Spirits of Nitre, one ounce  
Antimonial Wine, half an ounce.

Mix them together, and give a tea spoonful every hour, in a little hot tea. Continue this till the pills operate freely. If the fever still continues, give the following powders :

*Recipe :* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.

Mix, and divide into six powders. Give one every hour, in warm balm tea, or some other herb tea. Continue them till the patient perspires freely. As soon as the fever is off, begin immediately and give the following pill :

*Recipe :* Calomel, ten grains.  
Sulphate Quinine, ten grains.  
Tartar Emetic, one grain.

Mix, and form ten pills. Give one every half hour, while free from fever. Should the fever rise, give the following draught :

*Recipe :* Strong Senna Tea, half pint.  
Rochelle Salts, one ounce.  
Tartar Emetic, one grain.

Dissolve the salts and tartar in the tea, and give it at four or five drinks, half an hour apart, till the bowels are freely acted upon, when the fever will abate; then you may give the last-mentioned pills again. If the bowels should become irritable at any time, as they sometimes do, and the discharges are frequent and watery, give :

*Recipe :* Calomel, twenty grains.  
Opium, two grains.  
Piperine, one grain.

Form four pills. Give one every hour till the liquid purging is checked. In four or six hours after, give a dose of castor-oil. Any of the above medicines may be repeated in their proper places, from day to day, till the fever is entirely broken. At any time when the fever is high, the face, hands, arms, legs and feet, may be repeatedly bathed in cold vinegar and water, or water alone. If there is much pain in the head, and the fever is high, a second bleeding may be used advantageously; or if there is much pain or soreness in the stomach or bowels, ten or fifteen leeches may be applied over the pained part, and the bites allowed to bleed for two or three hours. If leeches cannot be had, cups may be used, and in some cases a blister plaster may be applied with great benefit. After the fever is broken and does not return, some vegetable tonic will be proper, such as Huxham's tincture, — (see *Materia Medica*,) — a tea spoonful of which may be taken three times a day, in a wine-glass of water, or ten grains of

quinine, dissolved in an ounce of water, may be taken, a tea spoonful three times a day, or ten or fifteen drops of elixir vitriol, before each meal. It will make half a glass of water pleasantly sour. Any of the vegetable tonics will here be serviceable. In the whole course of the fever, the skin should be kept clean by frequent ablutions, or aspersions with a sponge and warm water. The diet, in all cases, during the cure, should be light and thin, and but little taken at a time. As soon as the patient is able to bear it, exercise on horseback should be taken every day, but not so as to fatigue or debilitate. All exposure should be avoided.

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### INFLAMMATORY OR CONTINUED FEVER.

It is somewhat difficult, at all times, to characterize this fever at first sight; for a simple continued fever from its commencement is of rare occurrence. Almost all fevers commence with a chill, and for the most part have one or two intermissions, and these occur within twenty-four hours from the access or chill. This is perhaps owing to a general law of disease, which causes all diseases to assimilate more or less to the epidemic, if any prevail at the time; so that much may be gained by a correct knowledge of the diseases that prevail at the time in the neighborhood. If remittent fever prevails, you may be pretty sure that the fever you first take to be a continued bilious fever, has some remissions, though they may be lightly marked. If, upon a close examination of the symptoms, you find this to be the case, it should be treated as a remittent fever; but should there be no chill or coolness of the ends of the extremities, as the point of the nose, lobes of the ears, the fingers and toes, it is not of the remittent type. Yet if the coldness can be found in any of the above places, at any time in twenty-four or forty-eight hours, or at any intermediate time, it will govern the type of the fever, and call for its own appropriate treatment. Should the fever be ushered in by a chill, and after this no cold stage occur again, but the fever continue unremitted, then the type of the fever will be certain. This fever is attended with considerable heat on the surface, a dry skin, coated tongue, thirst, pain in the head and back, aching in the bones, loss of appetite, and watchfulness. The febrile paroxysm will last, without any abatement for forty-eight or fifty-six hours, when a slight abatement may



be discovered, but no sweat. The patient, however, in this slight respite, will sleep a little, but does not feel much refreshed by it. The fever is generally higher when he awakes than it was when he dropped to sleep. This form of fever, if let alone or badly treated, will run a course of four, six, or eight weeks, before it subsides entirely. It generally lasts till the flesh is wasted from the frame, and the subject becomes a skeleton; the skin is hot and dry all the time; that on the hands and feet becomes parched, and the lips seem to dry up and peel. The urine is high-colored and small in quantity. The patient often feels restless, and tosses himself from side to side on the bed. He is apt to be more or less delirious, and talk incoherently at times, and, if the fever progresses, he becomes anxious to be removed, and talks of going home. His tongue is now dry; he breathes hard and quick; his pulse becomes frequent, and smaller than it was in the first stage of the fever. These are bad symptoms, and indicate great danger, especially if the bowels are too loose, and the discharges thin, yellow or briny, and smell badly. If let alone, he presently feels disposed to lie on his back, with his mouth a little open; his eyes look sunken and rather red; he dozes, and when aroused is not conscious, for a moment, where he is. All such symptoms indicate great danger.

#### TREATMENT.

This fever is essentially inflammatory in its type; hence the antiphlogistic treatment is demanded by all the symptoms that characterize it. If the pulse is full and strong, the treatment should be commenced by taking blood freely from the arm; if the blood is permitted to run till faintness comes on, a more decided impression will be made. The detraction of blood should be followed by an emetic, and that by an active cathartic in ten or twelve hours.

*Recipe:* Calomel, ten grains.  
Jalap, twenty grains

Mix, and give it for a dose; or, if the patient is strong and vigorous, give twenty grains of calomel with the jalap. Work this medicine off with gruel without salt in it. When the operation is over, if the fever continues, the patient should be bathed or sponged all over with cool vinegar and water. If the vinegar cannot be had, use the water alone. After the surface has been well sponged, wrap the patient up in bed, and give him a full draught of *cold water*, and he will be likely to sweat. If

he perspires freely, you have succeeded in breaking the chain of morbid action. He then should rest for six or eight hours, and take light nourishment. You may then give the following purgative :

*Recipe :* Calomel, ten grains.  
Aloes, twenty grains.  
Rhubarb, twenty grains.  
Tartar Emetic, two grains.  
Opium, one grain.

Form twelve pills; give one every hour till all are taken. They will first induce a perspiration, then act as a cathartic. During the administration of the medicine, occasional draughts of balm or ditiny tea should be taken. Should the pills fail to act upon the bowels, they may be aided by a draught of senna tea, or a dose of castor-oil. If, after these medicines have been given and worked off, the fever still continues, the whole person should be sponged with cold vinegar and water, and be immediately wrapped in blankets, and a draught of cold water given; or he may take the following febrifuge medicine.

*Recipe :* Cream Tartar, one drachm  
Salts Nitre, twenty grains.  
Tartar Emetic, two grains.  
Gum Camphor, four grains.  
Opium, one grain.

Mix well. Divide into six powders. Give one every hour in a little warm herb tea, and let the patient drink freely of warm tea, till a free perspiration is induced, and kept up for three or four hours. The dolicus pruriens (pleurisy root) will make the best tea in this case, for it can be given while the fever is on, with safety. If the fever rises again, after this, and the bowels are in a good state, you may wrap the patient in a wet sheet, rolling it around him from his chin to his feet, and covering him in bed, and he will in twenty minutes sweat freely. After the perspiration ceases, take the wet clothes from about him, and rub the surface freely with a coarse towel, and put dry clothes on him, and cover him up in bed again. Some light nourishment may now be given. If he needs a purgative after this, the bowels may be kept open with the following pill :

*Recipe :* Scammonia, twenty grains  
Aloes, twenty grains.  
Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Ground Ginger, twenty grains.

Form twenty pills. From four to six will be a dose if taken at bed-time. If they should not operate by morning, two or



three more may be taken. If this medicine cannot be had conveniently, use *rhubarb* or *castor-oil*, or the *extract of white walnut*, which is equal to rhubarb in these cases. (See *Materia Medica*.) After the fever is broken, the patient will be weak, and the appetite not very good; to improve which, and strengthen the stomach, ten drops of *elixir vitriol* may be taken in half a glass of water, three times a day. Some mild tonic may also accompany it, such as an infusion of gentian root and orange peel; a small portion of each infused in a pint of hot water. Two or three table spoonfuls may be taken at a time, and repeated three or four times a day. Sometimes, in this form of fever, a diarrhœa comes on, which prostrates the patient very much; to check which, kino and opium are frequently given—*which medicines never should be given combined together, as they invariably increase the purging*. Before any medicine is given to check this diarrhœa, the region of the stomach and abdomen should be carefully examined, by pressing on them with the fingers, and if any pain, soreness or tenderness, be detected in any of these regions, if the patient's strength will bear it, apply leeches or cups over the painful point. If they cannot be had, apply a blister plaster over the part, and as soon as it begins to draw give *a grain of opium*, or a quarter of a grain of *morphine*; or the dose may be divided, where the patient is weak,—say a quarter of a grain of opium every hour, or the eighth of a grain of morphine at the same intervals, till the purging is checked. Where no inflammation exists, and the purging is induced from extreme relaxation of the bowels, it can sometimes be checked by quinine and piperine.

*Recipe*: Quinine, six grains.  
Piperine, one grain.

Form six pills. Give one every hour till the purging is checked; but where any inflammation exists, this medicine should not be given. After the purging has been arrested for twenty-four hours, the bowels may be moved by an injection of molasses and water, or slippery-elm tea, or gruel and lard, &c. The patient, during this period, should drink freely of some mucilaginous tea, or rice-water. If the soreness of the bowels continues after this treatment, and small brawny discharges are passed, give,

*Recipe*: Nitrate of Silver, five grains.  
Gum Arabic, one hundred grains.

Make all fine, and mix; divide into ten powders. Give one, three times a day, in sugar, or, if the diarrhœa is troublesome,

you may repeat the powders every four hours, with eight or ten drops of laudanum in each dose, till the purging is checked. When the inflammation is removed from the bowels, the recovery will be slow. The principal remedies now consist in enemata, to keep the bowels open, and a light and nutritious diet. The diet, through the whole course of treatment, should be light and thin, and a little warm. The drink, except when tartar or calomel is given, should be cold. In convalescence, all exposure to the heat of the sun, or rain, or night air, should be avoided; also fatiguing exercise. Great care should be taken in returning to the use of strong diet, as relapses frequently occur from this source, and they are more dangerous than the first attack. A little good wine and water may now be serviceable, if carefully used. Moderate exercise on horseback and the use of wild meats will promote the recovery.

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### BILIOUS FEVER OF THE SOUTH.

Bilious fever is the prevailing form of fever in hot climates; and although nearly allied to some other forms of fever, especially the marsh remittent fever, already described, it occurs in situations both by sea and land, where miasmata could not be suspected to give rise to it. The character of this fever is rarely ever mistaken by physicians of reading and observation, notwithstanding the symptoms are much diversified, owing to peculiarity of constitution, climate, season, and the modes of life of its subjects. This makes it more difficult to describe all the minutiae of its symptoms. There are always, however, some prominent symptoms, which so universally characterize this fever as to leave no doubt as to its true type. These symptoms are, pain and irritability of the stomach and around that region; pain in the head, and especially over the eyeballs; pain in the back and loins; sickness at the stomach, and vomiting of bilious matter, and not unfrequently delirium, which sometimes proceeds to perfect madness. The pulse is not always altered in frequency even at this stage of the disease; at other times it rises to 130 or 140 strokes in a minute. In other cases, the symptoms vary; the attack commences with cold rigors; pain and sickness at the stomach; vomiting and headache; oppression at the upper orifice of the stomach, extending around under the ribs into the region of the liver, spleen, and diaphragm; with great dejection of

spirits. Sometimes, without manifesting any previous indisposition, the patient will fall down in a fainting fit, during the continuance of which the countenance is pale and gloomy. As the subject recovers from this condition, he will express the pain he suffers by applying his hands to the stomach and head, and after vomiting a considerable quantity of bile, his senses are restored. Let the disease appear in whatever form it may, at first the pulse, if they vary from the healthy standard, are small, feeble and quick. The pain in the stomach is apt to increase and the vomiting continue. As the paroxysm advances, the countenance becomes flushed, the pulse quick and full, the eyes more or less red, tongue fired, the thirst intense, the pain in the head becomes severe, succeeded by delirium, and the patient becomes unmanageable. This state of morbid action continues for twelve or fourteen hours, when a perspiration begins to make its appearance, and the violence of the symptoms to subside. In the remission, the pulse falls to ninety, the delirium subsides, and the patient complains of great debility, nausea and bitter taste in the mouth. This remission, which is only for a short time, is soon succeeded by another paroxysm, in which all the former symptoms are aggravated, particularly the thirst, delirium, pain in the stomach, and vomiting of bile. If the disease is not properly treated in the beginning, the remissions entirely disappear, and the skin becomes moist and clammy; the pulse small and irregular; the tongue dark and crusted; the pain in the stomach becomes more severe, and the vomiting of bile increases till death ensues. The features of this fever are such as characterize all violent and fatal fevers. If it is not arrested in its progress, its duration will be from three to seven days, though it is in some cases protracted to fifteen or twenty; but these cases are rare. When, however, they do occur, visceral obstructions are very apt to be the consequence, and the patient is liable, finally, to be carried off with dysentery or disease of the liver. The skin is apt to turn yellow, and sometimes matter is ejected from the stomach very much resembling that thrown up in yellow fever. When this form of fever generally prevails in a section of country, it is not uncommon for the acclimated inhabitants to present a yellowish tinge on the skin, as I have often seen in the south, and especially in New Orleans. A torpid or irregular state of the bowels almost always precedes an attack of this form of fever, unless it be suddenly developed by cold dews by night and the intense heat of the sun by day, or by some irregularity in eating

or drinking. In such cases, there are but few premonitory symptoms. In describing this fever, the symptoms are carried out in all their various manifestations. But it is not to be expected that every case will present all the symptoms here laid down; but that they may vary both in number and violence. Nevertheless, every case will present enough of the leading symptoms to characterize the type of fever. In the most violent attacks of this fever, the symptoms very much resemble those of yellow fever; and if the physician is not acquainted with both forms of fever, he will be likely to confound them, and, by so doing, produce among the friends a state of alarm altogether uncalled for. We may, however, truly say this is a fearful disease, and requires prompt and efficient treatment. The treatment may vary, and yet be successful. The general character of the epidemic and violence of the attack, varying under various circumstances, admit of variations in the mode of treatment. There are two modes of treating this form of bilious fever, which have been used by eminent medical men. One of them I have fully tested to my satisfaction, when I lived in New Orleans, in 1826. The other mode I have not tried, not having as much confidence in it as I have in the former. But I shall give them both, because the milder forms of the disease may be treated successfully by either mode of practice.

#### TREATMENT.

I shall first describe the mode of treatment that I esteem best and most safe. The first symptom that claims attention, in this disease, is the irritability of the stomach, accompanied by a distressing vomiting. The relief of this symptom is the first step towards the cure, as it is developed in consequence of an excessive engorgement, and perhaps incipient inflammation of the stomach. The first remedy to be used for its relief, is the detraction of blood; this should be taken from a large orifice in the arm. But the unskilful and trifling manner in which blood-letting is performed, often does more harm than good. If you bleed at all, bleed boldly and decisively from a large orifice. The blood should run till the pain in the head and stomach is relieved. The finger should be kept upon the pulse, and the blood permitted to run till they become soft, and the pain in the head and stomach subsides. Immediately after the detraction of blood, give the following medicine :



*Recipe :* Calomel, twenty grains.  
Opium, half a grain.

Mix them in sugar, with a few drops of water, and let the patient take it immediately. This will tranquillize the stomach. It is well known to medical men that calomel, in large doses, acts as a sedative, tranquillizing the stomach and bowels, in many cases, as soon as it is taken. Should the irritability of the stomach, however, be so great that the first dose is rejected, repeat it immediately. In a few hours, when the stomach is calmed, give the following purgative, to work off the calomel :

*Recipe :* Scammonia, ten grains.  
Aloes, ten grains.  
Jalap, ten grains.  
Calomel, six grains.

Form six pills. Give three at a time, two hours apart. If they should not operate freely in one hour after the last pills are taken, they should be elicited by an injection of strong salt and water, which may be repeated every hour till the desired effect is produced. Five or six free evacuations of dark bilious matter will greatly relieve the urgent symptoms. The more copious the purging, the less danger there will be of a return of vomiting ; an object greatly to be desired in the cure of this fever. But should the dangerous symptoms return, viz., the intense headache and pain in the stomach, especially if there be delirium, bleeding should be resorted to once more. Do not be alarmed at the false bugbear, debility, or putrefaction, which so often paralyzes the hands of medical men in warm climates ; for the liver is excessively engorged with blood, and if it is not removed the liver will be broken down in its structure, and then your patient will most inevitably die. Then bleed a second time, and immediately repeat the calomel and opium as at first, and work it off with the pills ; using the injections, if necessary, to promote a free catharses. These discharges will be dark and fœtid, as the others were. The free action of this cathartic should be followed by the exhibition of five or six grains of calomel every five or six hours. If the stomach should be much sick, you may give half a grain of opium with every dose, or every other dose, of the calomel, so as to keep the stomach calm. Continue this practice till the gums become sore, and the patient begins to spit freely. The bowels should be kept open with the following pills, and the salivation gradually worked off :

*Recipe :* Scammonia, twenty grains.  
Aloes, twenty grains.  
Jalap, twenty grains.

Form twenty pills. Give two or three every two hours, till they operate two or three times. Omit the calomel while you are giving the pills. If the patient cannot take the pills well, you may give the following purgative :

*Recipe :* Jalap, twenty grains.  
Cream Tartar, sixty grains.

Mix. Give it in sweetened water. If it should not operate in four hours, repeat half the quantity. If the above medicine cannot be had, give a dose of castor-oil. While the stomach is sick, and the vomiting continues, but little fluid should be taken into the stomach. But if the stomach is not sick, small draughts of lemonade may be taken, or orangeade, which is better, if it is made of the pulp of the orange deprived of the rind ; or water acidulated with cream of tartar. The great sheet-anchor in the cure of this formidable fever is mercury, which should be given till a slight salivation is produced. When this is effected, your patient is safe, under judicious management. I would, however, remark that sometimes the pain in the stomach is so severe, and the vomiting so obstinate, that the remedies above prescribed will not remove them. In this case, if you press upon the region of the stomach with your fingers, you will find great soreness there ; this being the case, there is inflammation, and immediately twelve or fifteen leeches should be applied over the tenderest part. If leeches cannot be procured, cups should be applied, and blood freely abstracted. After either leeches or cups, the wounds should be kept bleeding for an hour or two, by applying warm wet cloths, and frequently renewing them. If this should not relieve the pain, a blister plaster should be applied over the stomach, and permitted to draw fully. In weakly patients, leeches should be applied instead of a second bleeding from the arm. In the progress of the cure, when you have caused the patient to spit freely, your great care will be to keep the bowels open, which should be effected by the use of the most gentle medicine. By attending to the following directions, the teeth will not be injured by salivation. Remove the phlegm carefully from the teeth and gums three times a day ; be sure that it does not become encrusted on the teeth. If the saliva does not act upon the bony part of the teeth below the enamel, caries will not be consequent on salivation. The following makes an excellent tooth-water :

*Recipe :* Yellow Root, sixty grains.  
Borax Soda, sixty grains.  
Tincture Myrrh, one ounce.  
Warm Water, one pint.  
Good Vinegar, one gill.



Simmer over a gentle fire fifteen minutes. Then strain, and add honey or loaf-sugar sufficient to sweeten it. Keep the mouth perfectly cleansed with this. After using this mouth-water, each time, rinse the mouth with common spirits of camphor; this will smart a little, but will be found an excellent wash for salivated gums. At the same time, the following tonic should be used:

*Recipe:* Sulphate Quinine, ten grains.  
Huxham's Tincture, two ounces.

Dissolve the quinine in the tincture. Give a tea spoonful every four hours, in a little water. A little wine and water may be taken occasionally. The diet, during the cure and convalescence, should be light and easy of digestion. The room, during the whole period of illness, should be well ventilated, cool and clean. The use of cold water cannot be resorted to in this fever as it can in continued fever. It may be applied to the head, in case of violent pain there, but the general application of cold water to the whole body, in this fever, is of very doubtful utility. After the second dose of medicine has been freely worked off, a hasty draught of cold water will sometimes bring on a free perspiration; and for a crisis, I have now given what I believe to be the safest and best practice in this formidable fever of hot climates. But that you may not be left with this only, I will now give the other mode of treatment, as pursued by some eminent physicians. It is the following:

On the commencement of the attack, give the following medicine:

*Recipe:* Glauber Salts, one ounce.  
Tartar Emetic, three grains.

Mix. Dissolve this potion in half a pint of warm water. Give one third every fifteen minutes, till the patient pukes freely. Work this off in the usual way of treating an emetic. As soon as it turns down on the bowels, give warm rice-water, or gruel, freely; cream tartar should be dissolved in the gruel. When the operation is over, give the following medicine:

*Recipe:* Tartar Emetic, one grain.  
Mint Water, two ounces.  
Laudanum, twenty drops.

Mix. Give one fourth of this every hour. Still let him drink freely of the rice-water and cream tartar, till the next morning, when from five to ten grains of calomel should be given, and repeated every five or six hours. One fourth of a grain of tartar emetic, with eight or ten drops of laudanum, should be given

three or four times a day. The design of the tartar and laudanum is to keep up a moisture on the skin. If the calomel does not move the bowels in twenty-four hours, give a dose of Epsom or Rochelle salts. After the operation of the salts, commence with the calomel, tartar and laudanum, as before directed. If the pain continues in the stomach, apply a blister-plaster over it, and give the following medicine:

*Recipe:* Vitriolated Ether, one ounce.  
Laudanum, one drachm.

Mix. Give forty drops, in warm drink, every hour till the stomach is relieved. But the calomel and opium should be continued till the patient is freely salivated. The diet and drinks may be used as in the first mode of treatment, and the sore mouth managed in the same way. The precise dose of medicine cannot always be given, in either mode of treatment, but must be varied according to the age and strength of the patient. I have already stated my preference to the first mode of treatment.

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## SIMPLE TYPHUS FEVER.

WE mean by simple typhus fever the mildest form of that fever; for there are three modifications or grades of typhus fever. We shall treat of them separately, under their appropriate heads or titles. Like most other fevers, simple typhus has three stages. The first is that of oppression, which is marked by a variety of symptoms, among which the following are the most prominent: paleness of the face; a peculiar look of dejection and weariness; some degree of darkness around the eyes; great weakness of muscular power, and of the energies of the mind also; the sensibilities are dull; there are cold, creeping sensations over the body, alternated with hot flashes; a loathing of food and occasional vomiting; the tongue is white and clammy; there is a sense of weight in the stomach, and an anxiety of mind indicated by frequent sighing; and there is a sensation of aching, heaviness, and giddiness in the head; also, coldness in the back and pain in the loins; a quick, low, and struggling pulse, irregular in frequency and force. These symptoms are accompanied with a general uneasiness, like that produced by long and fatiguing exercise. Sometimes these symptoms are developed rapidly, but in other cases they come on more slowly, and two or three days may elapse before the disease is fully developed. But, finally

the second stage is ushered in by the development of fever. In strong, athletic persons, the strength and frequency of the pulse are now greatly increased. The pulse is fuller, thrilling, and rather hard under the finger; the cheeks are flushed with a dusky redness; the eyes are heavy, and the lips parched; the breathing is quick, and the skin almost always dry; the heat of the body is generally above the natural standard; the tongue covered with a white or yellow coat; the thirst is great, and the pain or uneasiness in the head increased; the brain is easily excited; every symptom denoting clearly an excess of excitement. This stage, in simple typhus, holds its even tenor for some time, probably six, eight, or ten hours. As the fever proceeds, the brain shows more signs of disease, by reveries or delirium, which is apt to come on in the evening when the fever is highest. Towards morning the fever abates, and these symptoms also. After the first paroxysm, the debility is greatest during the fever. During the febrile paroxysm the bowels are constipated; the fæcal discharges, when they do appear, are darker than natural, and very offensive; the breath and perspiration also are offensive. The urine is highly colored and smells strong; it is small in quantity. The second stage of this fever will last from five to seven days, according to the strength of the patient and the violence of the attack. The febrile excitement then subsides, and the third stage, or that of collapse, takes place. This stage is announced by signs of depression in the voluntary powers; the skin relaxes with a variable temperature, and the pulse evidently becomes weaker and softer, and is easily compressed under the finger. In the milder forms of this fever, the first approach of collapse is apt to be taken for a favorable termination of the disease; for, although the patient may complain of much general debility, and sometimes of soreness in the flesh, with wandering pains and cramps in the extremities, yet the tongue will be found softer and cleaner, the pulse slower, and the breathing deeper and less frequent. But if this is really the stage of collapse, these favorable symptoms will not last long, but the fatal symptoms soon begin to develop themselves, viz., sudden prostration; quickened but weak pulse; the tongue becomes fouler, darker and drier; the voice becomes weak and faint; the articulation less distinct, and the breathing shorter, weaker, and more anxious; the delirium more constant; the countenance dejected, sunken and inanimate; the skin feels oozer and rather shrivelled, and the general heat of the surface

diminished, though variable; the patient becomes more restless, and a peculiarly unpleasant odor arises from the body, and frequently a short convulsive cough comes on by fits or paroxysms. The patient is now disposed to lie on his back; the fingers and toes often twitch and jerk; he often fancies he sees objects that are not apparent to others, and reaches out his hand to take or catch them; he mutters in a low delirium; he has some difficulty in swallowing; slides down in the bed, and draws up his feet frequently towards his body. These symptoms vary in different persons. Before the close of this fatal crisis, the stomach ejects whatever may be taken, and with it a thin, greenish fluid. Ere long, death closes the scene, either in slight convulsions or a deep stertorous breathing. In the treatment of typhus fever, we must carefully note the different stages through which it passes, and the remedies must be used accordingly; for it must be kept constantly in mind, that the remedies proper to be used in one stage will not be applicable in any other stage. If these facts are not kept in view, the treatment will be sure to fail. In the following plan of treatment, I shall prescribe the remedies proper to be used in each stage, under their appropriate heads.

#### TREATMENT IN THE FIRST STAGE.

As soon as a person is attacked with typhus fever, he should immediately cease to take exercise, and, if practicable, go to bed; for, no matter how mild the symptoms may be at the commencement, it is impossible to foresee to what they may finally lead, if they are neglected. The danger is always increased by attempting to cast off the disease by exercise. It is in this stage of typhus fever that we are to expect the greatest good from a little medicine. We must not be deterred from the use of proper remedies at this period, through fear of debility, which has led thousands to the tomb. In the first stage of typhus fever, the stomach is generally sick, and apt to reject anything that is taken; for this reason, and because emetics always tend to equalize the circulation, when judiciously administered, we should commence the cure by the administration of an emetic:

*Recipe:* Pulv. Ipecac., twenty grains.  
Tartar Emetic, three grains.

Mix. Prepare and give in the usual way. When it is worked off, if it has not acted freely on the bowels, give an injection, so as to empty the lower bowels effectually. Wait a few hours, and give the following purgative:

*Recipe:* Calomel, twenty grains.  
Rhubarb, ten grains.  
Aloes, ten grains.

Form six pills, and give three every two hours till they operate freely. Should they all be taken, and free purging not ensue, (for the bowels are always torpid in typhus fever,) give an ounce of *castor-oil*. Three or four free evacuations from the bowels will strengthen rather than weaken the patient; for the bowels require to be unloaded of the feculent matter that has accumulated there during their torpid state. On this effect being produced, the patient will feel stronger, and the blood will circulate more freely, and a more uniform warmth will succeed. But should the surface continue too cool, and the circulation be languid, he should be put into a bath a little above blood heat, and remain there fifteen minutes, then be wrapped up in bed. The temperature of the room should be kept equal and comfortably warm. No stimulants should be given in this stage of the fever, excepting to very feeble persons; then a little wine may be taken in the form of warm sangaree; but use it cautiously, lest you change simple typhus into inflammatory typhus. A free use should be made of barley-water, rice-water, or thin, warm gruel; this will answer for food and drink. If this should not arrest the disease, the next day you should give the following purgative:

*Recipe:* Blue Mass, ten grains.  
Aloes, ten grains.  
Rhubarb, ten grains.  
Castile Soap, ten grains.

*Mix.* Form eight pills. Give two every two hours till they operate. Still use some of the above drinks. If this does not arrest the disease, it will make the febrile stage much shorter.

#### TREATMENT IN THE SECOND STAGE.

The second stage is that of excitement, and is far more frequently witnessed by physicians than the first or chilly one. A physician is seldom consulted till the fever has fully developed itself. He has, therefore, no opportunity to arrest the disease in its onset. In this stage of the fever the pulse is full, hard, and strong, and the skin dry; the tongue is generally coated and dry; thirst great; the breathing hurried, and the patient more or less restless, with pain in the head and back. Examine him closely; inquire if he has any pain in any part of the chest, stomach or bowels; examine them by pressing upon them with



your fingers in every part. If you find no soreness anywhere, the first thing that you should do, if his room has not been kept too close so as to heat him, and he feels no chilliness on any part of his body or limbs, take him out of bed and place his feet in one tub of warm water while he sits over another, and suddenly pour about two gallons of water, less than blood-warm, over his body; wipe him dry immediately, and cover him lightly in bed between clean sheets. Be careful to notice all the above directions strictly; for when this is properly conducted, it is a most powerful remedy in the second stage of mild typhus fever. As soon as you have wrapped him up in bed, if he has taken no medicine before, give the following:

*Recipe:* Calomel, ten grains.  
Jalap, ten grains.  
Aloes, ten grains.

Mix, and divide into two powders. Give one immediately, and the other in two hours. Give them in sugar, (*never in honey.*) If they do not operate in two hours more, give an active injection. Rice-water, or gruel a little warm, should be freely taken to work them off. Keep the room comfortably warm, and be careful not to exclude the pure air from the patient by surrounding the bed with curtains. A cold current of air should not, however, pass over the patient, as it may cause the fluids to recede from the external to the internal surface, thereby producing inflammation of the stomach, bowels, chest, liver or kidneys. The cold-bath, however, when properly applied, has a very different effect, and, in the hands of a judicious person, and properly timed, is a powerful remedy in the cure of typhus fever. It should never be used except there is a uniform temperature over the whole surface, twelve or fifteen degrees above blood heat. The dash is the proper mode of using it, and after this manner: strip the patient in a close room, place him over a tub, and pour two or three gallons of water, of the temperature of eighty-five degrees, over his head and shoulders, and immediately wipe him dry; cover him up in bed, and he will perspire freely. But should you be doubtful of your judgment in its use, then use water of the temperature of one hundred degrees, with some spirits in it. Apply this, with a sponge, over the whole surface. If he does not perspire by the use of this remedy, aid it by the following medicine:

*Recipe:* Spirits Mindereri, two ounces.  
Sweet Spirits of Nitre, one ounce.  
Laudanum, two drachms.



Mix. Give a tea spoonful every hour in half a teacupful of warm balm, hyssop or sage tea, till the perspiration is fully established. A free perspiration will reduce the fever, and the patient will sleep. The sleep generally takes place about eight or ten o'clock at night. If the fever should rise again the next day, repeat the purgative: or, if the one above has operated too freely, (recollect there should be from three to five operations in twenty-four hours,) give the following:

*Recipe:* Blue Mass, twenty grains.  
Aloes, ten grains.  
Rhubarb, ten grains.

Form six pills. Give two every hour till they operate, or all are taken, beginning the administration about twelve o'clock in the day, so that they may commence operating about the time the fever rises in the afternoon. When the fever begins to rise, commence and give the drops as you did the day before; and, as soon as the pills have operated freely two or three times, use the spirit-bath, as before, to allay the heat; this may be repeated every hour till the fever subsides. This course should be repeated every day till the fever is broken, and ceases to return. The purgative may be varied some days to *castor-oil*, instead of the pills. But if the discharges from the bowels should be very thin and smell badly, and mixed with curds of yellow or green matter, and the evacuations should be frequent and small, you must change the purgative, for there will be likely, under such circumstances, more or less sickness at the stomach:

*Recipe:* Calomel, twenty grains.  
Dover's Powder, ten grains.

Mix, and divide into four powders. Commence in the morning and give one every two hours, in sugar and a few drops of water, till all are taken. If they should not operate in two hours from the time the last dose is taken, aid them by an enema of gruel or starch. The powders may be repeated the second day; but should the discharges be thin, examine the stomach and bowels carefully, as before directed, to see if any inflammation exists. This, indeed, should be done every day in typhus fever; and if any tenderness exists in these regions, apply ten or twelve leeches, or a dozen cups over the part, and draw blood freely. If the soreness continues after the abstraction of blood by leeches, apply a blister, and let it draw fully. The diet should all this time be something thin and light. No animal food should be allowed in typhus fever, and no stimulants of any description.

Giving strong diet and wine in typhus fever, for fear of sinking under debility, has sent thousands to the grave. If the appetite is not sufficient for the strength of the patient, when all fever is removed and the tongue clean, you may give ten drops of elixir vitriol, three times a day, in a small glass of cold water. This will be grateful to the palate, and strengthening to the stomach so that the patient can take enough food.

#### TREATMENT IN THE THIRD STAGE.

In the milder cases of typhus fever, if the treatment has been judiciously applied, but little medicine will be needed in the third stage. The powers of nature, assisted by light nourishment, will be sufficient to conduct the patient to a safe recovery. But in the more severe cases, where the first two stages have not been properly treated, there will be great necessity for medical aid in the third stage; but it must be very different from those used in the first and second stages. Evacuations must now be used cautiously, lest you prostrate the patient immediately. One or two moderate passages from the bowels in twenty-four hours will be sufficient. There are, however, some exceptions to this rule; and they are these: Where the patient has not been freely purged in the first or second stage, an extraordinary accumulation of fæces will have taken place; this occasions an alarming oppression to take place upon the brain, accompanied with great prostration of all the natural powers of the system. The face will be flushed, with a suffused redness of the eyes, and delirium with some degree of stupor; the breathing will be quick, the tongue foul, and the pulse irregular. Notwithstanding all these symptoms, you cannot take blood in this stage of the disease. But something must be done to relieve these dangerous symptoms, or the patient must die in a short time. The only remedy consists in unloading the bowels with a strong purgative. Then give the following:

*Recipe:* Calomel, twenty grains.  
Jalap, ten grains.

Mix, and give in simple sirup. In one hour give an active enema, and repeat it every hour till free evacuations are obtained. The strength of the patient must be supported during the operation with moderate portions of good wine. In the last stage of typhus, where the bowels have been neglected in the former stages and the brain is affected from their loaded condition,

much good may be done by cautious but gentle purging; while the strength is supported by wine or cordials, in moderate quantities. But great care must be taken in the administration of stimulants, lest fever be excited by them. In this stage of the fever, from previous neglect, sometimes small, frequent fœtid stools, mixed with blood and mucus, are ejected. Such a state of things does not require astringents, but rather a purgative course for a time, though this must be cautiously directed. This kind of purging is caused by morbid offensive matter retained in the bowels, which must be removed; for which purpose give:

*Recipe* : Calomel, twenty grains.  
Opium, one grain.  
Ipecac., two grains.

Mix well, and divide into four powders. Give one every two hours in sirup, till all are taken. If they do not operate in two hours more, give an injection. Should this fail to bring down free stools, give a dose of *castor-oil*, (one ounce,) in a little warm sweetened water. If necessary, support the strength with cordials during the operation; and, if need be, after the operation is over, if the patient is much prostrated, give five or six drops of *landanum* in the wine and water, and repeat every hour till the patient is tranquillized. But there are other circumstances in which the above purgatives would be almost entirely prohibited. If the patient has been kept in a very close apartment, where the room has been but little ventilated, though the bowels may have been daily attended to in the first and second stages of the fever, yet it occasionally occurs, that on the approach of the third stage, copious black, bloody stools, without any bad smell, are passed by the patient. If you then examine the legs and arms, you will probably see *petechiæ* making their appearance, which are at first few in number. (They look like a drop of black ink that has been allowed to dry on the skin.) They appear as if they could almost be rubbed off with the finger. This is a dangerous symptom. They soon become numerous, and spread over the body at different points. Presently they are accompanied by discharges of blood from the gums, nostrils, bowels and bladder, or several of these parts. Under these circumstances, you cannot use purgatives, for they will increase all these symptoms. Indeed, there is but very little, if any, possibility of success now. But to alleviate the sufferings of the patient, you must admit free air to his apartment. A liberal allowance of lemon-juice, mixed in small portions of good wine

with a few drops of laudanum, given occasionally, will be proper. If wine cannot be had, a decoction of Peruvian bark, with the lemon acid in it, and a few cloves, will be the best remedy. Such cases are generally hopeless. In all cases where the patient recovers from typhus fever, great care should be taken to avoid over-eating in convalescence. The diet should be light, and the bowels kept regular, with very gentle medicine, till their tone is restored. Gentle exercise on horse-back, or in an open carriage, in good weather, will be serviceable.

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### INFLAMMATORY TYPHUS FEVER.

THE symptoms which were noted in the description of simple typhus, viz., languor and sluggishness of feeling, and cold sensations, though not a distinct chill, or shake, and a peculiar, wearied feeling in the limbs, a white tongue, and loss of appetite are the forerunners of an attack of inflammatory typhus fever. In a short time after these symptoms make their appearance, a fever rises, which does not, as in the simple typhus, remit in the morning, but continues, without abatement, for twenty-four hours. The continuance of the fever is an important symptom in this form of the fever, and is one of its characteristic symptoms. Inflammation attacks different parts of the system, more or less. I shall show, in the progress of the delineation of symptoms, that the brain, the spinal marrow, the lungs, the pleura, the stomach, bowels, and liver, suffer more or less, by inflammation, at some stage of this form of typhus fever. Authors have divided these inflammatory states into acute and sub-acute. Now sub-acute inflammation only means, not so much inflammation as acute does; we therefore say that the disease is more or less violent, according to the amount and extent of inflammation that exists in any or all of these organs; for it must be borne in mind, that all of these organs are not inflamed in any one given case of the fever. The different degrees and amount of inflammation make a difference in the treatment, and a difference in the length of time the disease may last. The sub-acute may, and frequently does, change into acute inflammation during the progress of the disease; or the acute may be rendered sub-acute, by proper treatment, and so pass off. The acute form of inflammation generally rises on



the second or third day of the fever; but the sub-acute inflammation does not appear so early, and is not so easily detected when it does come on, for the symptoms are not so clearly defined. Therefore, in every attack of typhus fever, with a fixed pain in the head, chest, or abdomen, with a quick pulse, dryness of the tongue, and hurried and anxious breathing, and much general oppression of the strength, we may suspect acute inflammation to be seated there. If there be little or no pain, with a frequent pulse and hurried breathing, the tongue dry and parched, and covered with a yellow or brown coat, with great debility, we should suspect sub-acute inflammation to exist. But as these modifications of inflammation, coming on at different periods of the disease, require different modes of treatment, it is proper that they should be particularly noticed. When the acute form of inflammation exists in the brain, or within the head in any of the membranes of the brain, it is generally marked by various signs, such as, great irritability; an anxious, oppressed, or intoxicated appearance of the countenance; a dry, foul tongue; a quick and vibrating pulse; a flushed face, (though sometimes the face is pale;) a deep, pulsating pain in the head, with greatly increased heat there; the carotid arteries throb with a ringing sound in the ears; there is redness, with great sensibility of the eyes; there are generally transient pains in the bowels, and at the pit of the stomach, (called by physicians oppression at the pericardium;) costive bowels; uneasy respiration, attended with heavy sighing; nausea, and retching to vomit, without discharging much from the stomach. The patient feels fretful; is watchful; has visual delusions, with delirium, and these follow each other in quick succession. If the inflammation should uninterruptedly advance, these symptoms are succeeded by indifference to surrounding objects; faltering of speech, and a gradually increasing stupor; paleness of the face; brown or black tongue, parched and contracted; low mutterings; tremors of the hands; stupid, suffused, watery eyes; squinting, or dilation of the pupils, and sometimes a palsied condition of one eyelid. Now the petechiæ appear on the extremities; then an oozing of dark blood from the nostrils; a heavy, sterterous breathing; relaxation in the sphincter muscles; the bowels are involuntarily evacuated; convulsions come on, more or less severe, and death soon closes the tragic scene. These symptoms are all marked in their highest colors; but they are not to be found, nor expected, except in those patients

that have been left without treatment. But sometimes the most prominent symptoms are in the beginning. A bloodshot eye; a contracted pupil; an agitated expression of the countenance, and a peculiar species of moaning, which is almost constant. To these symptoms confusion of mind, tremors of the muscles, and stupor, often rapidly succeed, and the patient expires at last with a bloated face and heavy, laborious breathing. The pulse in these cases is less disturbed than would be supposed from the symptoms above detailed. The pulse is often, in these cases, but little above the natural standard during the excitement; and it falls but little below it when the patient is dying. When the patient complains of pain in the head, in order to ascertain whether there is inflammation in the brain, require him to shake his head quickly. If inflammation exist, he will move it slowly, as it creates pain to move it quickly. But if he can shake his head stoutly, you need apprehend no danger of inflammation in the brain. When the brain is greatly inflamed, sometimes the disease runs its course rapidly, and the patient dies in twenty-four, or thirty-six hours. Generally, however, it proceeds less rapidly, and the patient may live to the seventh or ninth day.

We now come to notice particularly the symptoms of the sub-acute inflammation in inflammatory typhus. They generally proceed much slower, and the patient lives longer, — sometimes fifteen or twenty days. For some days the sub-acute inflammation steals on imperceptibly. At first there is little more than the usual symptoms of lassitude, headache, and vertigo, with flying pains in the muscles or joints. There is an uneasy feeling in the stomach, with costive bowels, generally accompanied with loathing of food, and nausea, especially if the patient changes his position suddenly. The pulse is small and weak, but the carotid and temporal arteries beat with rather an increased force. The tongue, at first, is covered with a dirty white coat. The cheeks are alternately pale and flushed during the day. The countenance has a wearied, heavy expression, and the eyes feel as if there were particles of sand in them. The hearing is more or less affected, sometimes acute and sometimes a little dull. The head cannot be shaken without an increase of pain. These symptoms generally continue, with but little alteration, for three or four days; but the patient becomes more restless, and sighs frequently: his breathing is quickened; the pain in the head increases, and the eyes are more painful.



He now knits his eyebrows forcibly, and occasionally applies one or both hands to the forehead; and the pain continues to increase till it becomes very severe. The eyes are streaked with blood, and cannot bear the light. The anxiety and sickness at the stomach increases — ejecting fluids and other things taken into it. A yellowish-green water is thrown up with what is taken. The tongue now becomes very dry and stiff, and the coating that was on it a few days ago now slips off, and the tongue is red, or looks raw, and the teeth are covered with a brown sordes. The pain in the stomach increases, and also in the bowels, especially in the region of the colon, forming an arch over the stomach; but the whole abdominal region is more or less tender to the pressure of the points of the fingers. He sleeps with the eyes partially closed, and is apt to talk low in his sleep, and have frightful dreams. He starts up, and his mind wanders. As the disease advances, the sickness at the stomach increases, and the pain in the bowels increases also. The mind becomes more unsettled. At length, signs of an oppressed brain increase, and the patient gradually sinks into a low delirium, with petechiæ. Floating mucus is seen in the eye. These are the most common symptoms that present themselves in sub-acute inflammation, in inflammatory typhus. In lax and irritable habits, particularly in weak and hysterical women, hypochondriacal men, and constitutions broken down by intemperance, typhus fever, in any of its forms, is now and then accompanied by furious delirium. Dissections show, in this form of typhus, that the brain and its membranes have been very much engorged, or inflamed; so, also, with the stomach, bowels, and liver, and sometimes the kidneys. When the mucous membrane of the bowels is much inflamed, the discharges are thin, yellow, fetid, and frequent, the patient is soon reduced to a skeleton, and dies at last in a comatose state, and insensible, with low delirium.

#### TREATMENT OF INFLAMMATORY TYPHUS.

The treatment of inflammatory typhus differs from that of simple typhus, though the first symptoms are, in many respects, very similar in both forms of the disease. In inflammatory typhus, when the cold stage passes off, the fever rises, attended with more or less pain in the head. Sometimes it is very severe, with a sense of giddiness or vertigo. The eyes are more or less

red; the skin hot, generally with great thirst; the pulse full and hard, and from 120 to 140 strokes in a minute. In the first reaction, or febrile stage, if you desire the patient to shake his head quickly, he will not be able to do it, in consequence of the pain which it produces. This is a strong symptom of incipient inflammation of the brain; and, as no remedy is equal to the lancet for the removal of engorgement of the blood-vessels, which ultimately will lead to inflammation, the patient should be bled freely from a large orifice in the arm. If he is able, let him sit up; if not, prop him up in bed. Take from eighteen to twenty-four ounces of blood, according to his age and strength. A strong, athletic man can always bear the loss of more blood than a weakly one, or delicate female; and a man whose constitution has not been broken down by hard labor, or intemperance, can bear a greater loss of blood than one of the character last described. But blood must be taken according to the age, strength, and habits of the patient. As a general rule, keep your finger on the pulse, and let the blood run till it becomes soft under the finger, and the patient begins to look a little pale; then stop it, and if the patient becomes faint you will have gained a great point; you have produced a decided effect upon the heart and arteries, and a favorable impression upon the disease. But if you take only a few ounces of blood, and stop it, you only give the heart and arteries a good chance to increase the engorgement of blood in the veins, and have done more harm than good. After a full and free bleeding, if the patient has not been freely purged before, you should give him the following cathartic:

*Recipe:* Calomel, twenty grains.  
Rhubarb, twenty grains.

Mix and give the powder. If the patient is a delicate lady, or a weakly man, in either case give half the quantity. Elicit the operations by full injections of at least a pint or a quart of thin gruel, with salt and lard in it. Repeat it, if necessary, in two hours. Be sure to obtain at least four or five free evacuations in the course of ten or twelve hours. During the action of the medicine the patient's strength should be sustained by the free use of gruel, rice or barley-water. The room should be sufficiently ventilated, and at the same time strong light should be excluded. No more company should be admitted into the room than is necessary to afford the requisite nursing. The patient should not be allowed to talk much. If the heat of the

skin is great, and the extremities very hot, they may be bathed occasionally with water and spirits, a little warm. This will generally procure some remission of the fever towards morning, though it will not entirely remove it; it will rise again, early in the day: and if the pain in the head should return, with heat and burning of the skin, and a full, strong pulse, bleed again as much as he is able to bear without fainting. If he should become very weak after the bleeding, and not resuscitate in ten or fifteen minutes, give a little wine and water, which will revive him. After the second bleeding repeat a purgative. The same medicine as before may be repeated here, or the following may be given:

*Recipe:* Blue Mass, twenty grains.  
Aloes, ten grains.  
Rhubarb, ten grains.

Form eight pills. Give two every two hours till they operate. If the fever continues, and the pain in the head returns, there will also be more or less pain and soreness in the stomach. The stomach and bowels should be examined every day by pressing on them with the fingers. If any soreness is detected, and the strength of the patient will bear another bleeding from the arm, it should be immediately resorted to. But if the pulse is weak, bleeding by leeches will be preferable. Ten or fifteen should be applied, and as much blood taken as the patient can bear to lose. If leeches cannot be obtained, several cups should be applied over the sorest parts. It is true that six or eight ounces of blood taken by leeches will weaken the pulse more than double the quantity taken from the arm, at this stage of the fever. After the third day, as a general rule, it will be found better to bleed by leeches than the lancet. Therefore if, after the third day of the fever, the pain in the head should be severe, leeches should be applied behind the ears, and the mastoid process—the large bone behind the ear immediately—five or six on each side. The bites should be kept bleeding by the application of warm wet cloths till the pain in the head is relieved. If there is much pain in the back, as is frequently the case in typhus fever, which sometimes occupies nearly the whole length of the spine, it is pretty certain that there is inflammation in the coats of the spinal marrow, in which case leeches may be applied the whole length of the spine, at least as far as the pain extends. Cups may be used when leeches cannot be had. If the pain or soreness should continue in any of the above organs after the

leeching, blister-plasters should be applied over all these points, except the head, to relieve which they should be applied to the neck: let them extend from the hair down between the shoulders. As a general rule, blisters should never be applied till the stomach and bowels have been freely evacuated. A blister will always be of service over the stomach when much sickness exists there. For the first three or four days the bowels should be freely evacuated three or four times every twenty-four hours. For this purpose, after the first three or four days, he may take small doses of *calomel*—say five grains every three or four hours. If there is much nausea or vomiting, a quarter of a grain of opium may be given with each dose of the *calomel*:

*Recipe*: Calomel, twenty grains.  
Opium, one grain.

Mix, and divide into four powders. Give them as above directed. If they should not operate, give an injection. Injections are of great importance in typhus fever, and in almost all inflammatory fevers. If the head should continue to be affected, and delirium come on at night, the feet and legs should be bathed in warm water; this will be found most serviceable when the fever is highest. When extensive inflammation exists in the mucous coat of the bowels, there will be frequent thin, yellow, watery stools, which exhaust the patient very much, in which case frequent injections of starch and laudanum will be found to be of great service—a gill of starch and forty drops of laudanum; but this is to be used only after the bowels have been freely evacuated. If they have not been freely evacuated, the patient should take a full dose of *calomel*, which will frequently stop this yellow, watery purging. If the stomach is disposed to reject the medicine, which is not unfrequently the case, opium should be combined with the *calomel*, in small and frequently repeated doses, till the mouth becomes sore, which is a desideratum in the cure of typhus in this stage. To facilitate this object, where the stomach is very irritable, blisters may be drawn upon the wrists and ankles, and the sores dressed with mercurial ointment. But where this is forbidden by the exhaustion of the patient, small portions of cordial may be given, and the ointment rubbed in on the inside of the thighs and arms, repeating the application every eight hours, till the gums become sore. When the patient begins to spit freely, the discharges from the bowels will become thicker and green or dark, and lose their fetor; then you will have gained a desirable ascendancy over the disease; and the bowels should be kept open with a mild pill, as follows:



*Recipe:* Rhubarb, twenty grains.  
Castile Soap, twenty grains.

Form ten pills. Give two at bed-time; if they should not operate by morning, give one more. One or two operations in twenty-four hours will be sufficient. But this is not always the course typhus fever takes. The symptoms vary according to the attack, and the seat and extent of the inflammation. It will be recollected that I spoke of and described sub-acute inflammation. When sub-acute inflammation exists, it does not make its manifest appearance so early in the progress of the fever as acute inflammation does. The pain is less acute in the head, and comes on later in the stomach and bowels. These symptoms should be closely watched, for they may not appear before the third or fourth day of the fever. It is true, the pain in the head may be present, but not so violent; yet it may be detected by the patient shaking the head with some degree of violence. In this sub-acute form of inflammatory typhus, the fever is high, the skin hot, the tongue coated and dry, as in the active form, but the pains are not so severe either in the head, back, or limbs. The pulse will range from 120 to 130 strokes in a minute. Here you must also use the lancet as before. But in this form of the fever there is also a very deceptive condition of the circulation, which sometimes leads the practitioner astray, for the pulse may not be far from the healthy standard; it may not be, at most, over 95 or 100 strokes in a minute; but the breathing will be hurried more, in proportion to the frequency of the pulse, than in those cases where the pulse is higher. In these cases there are wandering pains in the legs and thighs, and sometimes in the arms, with a constant aching in the back and head, and occasionally, low delirium. When the patient sleeps, he is weaker in his bodily strength than he is when the inflammation is active. If you should be mistaken, and take these symptoms for those of positive debility, and stimulate your patient, you will do great harm, if you do not kill him. These symptoms are delusive. The debility is not real, from exhaustion, but negative, from oppression. The brain, spinal column, and the internal viscera of the chest and abdomen are engorged, and the influence of this engorgement upon the nerves has overcome the action of the heart and arteries, and produced these delusive symptoms. Now, if you will place your patient's feet and legs in warm water, with some mustard in it, and use active friction for ten or fifteen minutes, you will materially change his condition.

The pulse will rise. Then open a vein in the arm, and let the blood run freely: at first it will dribble from the orifice till it has run a few ounces; then the stream will enlarge and flow freely. After the blood has run for a few minutes, it is not uncommon for all the pains to increase, and the patient request the blood to be stopped, believing that he is made worse by bleeding. You have, however, used the remedy which, by proper management, will cure him. You have partially delivered the nervous system from the pressure of the blood, and the circulating system of its load. Let the blood run till the skin becomes moist, and the pain subsides, and the pulse, which rose and became full about the time the pain increased, becomes soft; then stop it. If the patient should become faint, the effect will be the more permanent. Immediately follow this bleeding with an active purge:

*Recipe:* Calomel, twenty grains.  
Jalap, ten grains.

Mix, and give it for a dose. Then proceed as directed in the acute form of the fever; for you have now rendered the disease active, by rousing it from its latent, hidden, and mischievous lurkings. But it is too often that this form of the disease is neglected till the third, fourth, or fifth day, before any attention is paid to it. Then, in some cases, it might be fatal to use the lancet; still, blood must be taken. You then should place your patient in the warm bath, and keep him there ten or fifteen minutes, and as soon as he comes out, draw blood by leeches behind the ears, and down the spine. From ten to twenty leeches should be applied, and after they fall off the blood should be invited to run, by the application of cloths dipped in warm water and applied to the bites; and if there is much pain or soreness of the stomach and bowels, leech these parts freely. The leeching may be repeated at any time if the inflammation demands it. If much inflammation exists in the stomach, the tongue, which is always more or less dry in typhus fever, now loses its brown or yellow coat, and becomes red and slick; hence the disease is called red-tongue fever by some. The teeth are covered with a brown, tough sordes. It proceeds from an excessively depraved state of the stomach, and its secretions. The tongue sometimes cracks and bleeds, and looks as slick and dry as if a hot iron had been passed over it quickly. After free operations have been procured from the bowels, and the fever continues, if the inflammation still exists, which you can ascertain by pressing on these organs, you have but little hope of a recovery except from



the use of small doses of calomel and opium, till a moderate spitting is produced. In the whole course of this fever, after the first free purging, you must, when the fever is on, give cooling medicines, such as the following:

*Recipe:* Spirits Mindereri, one ounce.  
Sweet Spirits Nitre, half an ounce.  
Elixir Paregoric, half an ounce.

Mix. Give a tea spoonful in some warm herb tea every hour. This will promote perspiration and greatly abate the fever. Moderate portions of warm lemonade will be grateful to the patient, and aid in cooling the fever; or the following cooling powders may be given:

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.  
Opium, one grain.

Mix properly and divide into six powders. Give one every hour, in warm herb tea, (balm,) till a perspiration is induced. If the warm bath be used in the evening, and followed by these powders, the patient will perspire freely, and a good night's rest will, likely, be obtained. Particular attention must be paid to the mouth and teeth, that they be kept clean. All the drinks in typhus fever should be a little warm, and slightly acidulated, or they may be mucilaginous. If there is much inflammation of the bowels they *must* be so. Gum arabic water—an ounce of the gum to a pint of water—makes a good mucilage; a few slices of lemon may be cut into it; or barley-water, flax-seed, slippery-elm, or marsh-mallow tea will be found beneficial. If the discharges from the bowels are thin and fetid, charcoal water will be good to correct the fetor and strengthen the bowels. A large lump of clean charcoal may be put into a pitcher, and boiling water poured upon it, and, when nearly cold, drank freely. When the stomach is much sick, and a yellowish or greenish water is frequently thrown up, the case is extremely dangerous. It shows extensive inflammation of some of the viscera of the abdomen. But little drink should be taken in such cases, because it is immediately rejected. In the last stage of the fever, wine whey, with some spices in it, should be given; and small doses of calomel and opium, with a view to salivate. The room should always be well ventilated, and kept as nearly an equal temperature as possible. No curtains should be allowed around the bed, as they confine the air, and help to keep up the fever. There should not be much light admitted into the room, as it always

aggravates the pain in the head; and, for the same reason, there should not be much talking to or near the patient, nor should he be allowed to talk much. But one patient should be in a room at a time. Favorable symptoms in this fever are,—a general abatement of pain, especially in the head and stomach, a correct exercise of the mind, reduction of fever, a moist skin, and uniformly warm sweat, refreshing sleep, a clean, natural-looking tongue, the fecal evacuations more natural, the bowels easily moved by medicine, and a return of appetite, which before was almost entirely lost. Great care should be taken, in convalescence, not to overload the stomach, either with light or heavy food, lest a relapse should ensue. It is an easy matter to relapse in typhus fever. If the patient should relapse before the strength is exhausted, it may be proper to bleed, if the pain and delirium return. But this should be done very cautiously, and all the remedies prescribed in the first attack may be used, but they must be regulated by the strength of the patient and the violence of the symptoms. The cold bath is always a doubtful remedy in typhus fever, but the warm bath is generally admissible. The author has had typhus fever four times, and knows from experience what he has written to be true, as well as from much observation. If this practice is properly applied, it will in general be found successful. Typhus fever may prevail at any season of the year, but it is most frequent in the fall and winter, when the weather is cool and damp, though I have known it to prevail in extremely cold weather, when all nature has been sealed up with ice and snow. I have also seen it in extremely hot weather. All ages and sexes are its subjects. It is not contagious, as far as my observation extends, except in very close and badly ventilated rooms. It may be communicated, where the pure air does not enter, and where the excretions are not speedily removed. This form of typhus fever is often called the winter fever, or the red-tongue fever, in the middle and western states. It is not apt to prevail in hot climates, yet it does sometimes very extensively. As before stated, the name of typhus fever is almost lost in the middle and western states; it is called winter or red-tongue fever,—a name that is too vague to be adopted into any nosology. It is the genuine typhus of all writers on fevers.

## CONGESTIVE TYPHUS FEVER.

THERE are three modifications of congestive typhus. We shall notice them separately, beginning with the mildest first, and so proceed. We shall give the treatment in the same order that we describe the symptoms.

*First.* The mildest form of congestive typhus fever may be known by the following symptoms. The patient will be able to walk about for a few days after he is attacked, and complain but little, except a dull, obtuse pain in the head, loss of appetite, and languor. He will look paler than usual. If you watch him closely, you will observe a change in his whole demeanor. He cannot so steadily command his attention as before; he feels restless during the day, and cannot sleep well at night, and soon betrays a loss of memory. His gait becomes unsteady, like that of a person half drunk, and he talks inconsistently with his former views on the same subject. These mental variations in a day or two become obvious to all his friends; his gait now becomes more unsteady, and his countenance has an intoxicated appearance. If his tongue be examined, it will be covered with a white coat, and appear larger than natural; his breathing will be hurried and his bowels slow. His body will be rather hot, but his extremities cool and damp. If nothing be done for him in this situation, the hands shortly become tremulous, and the mind more confused, till delirium is manifested. Yet there is not a regular excitement throughout the system. The face is alternately flushed and pale, the pulse feeble, and there is evidently an unequal state of the circulation over the whole system. This is evident from the coldness of the extremities, and the partially concentrated heat in the chest and head. The skin is relaxed. A deceptive hearing and illusive visions succeed to these symptoms. He now begins to use violent exertions, or exercise, and every attempt to control him tends to increase the delirium and exhaust the strength. His tongue grows daily more foul, and his debility greater. He begins to pick at the bed-clothes, and shortly petechæ and subsultus tendinum appear. About this time a general calm ensues, and the patient becomes so serene that the friends begin to think a favorable crisis has really arrived. Be not deceived! this is a delusive calm, only to be followed in a short time by a universal collapse, which will close in death probably, without much struggling.

*Second.* The second variety of congestive typhus fever generally comes on by a feeling of oppression and sickness at the stomach. The person is disposed to sleep, but if he should lie down and doze a little, it will not refresh him; he will awake with violent pain in the temples, heaviness, noise, and swimming in the head. The mind is not steady, the memory faulty, and he involuntarily sighs; his countenance soon acquires a look of extreme agitation; the skin is dry on the body, and damp on the extremities. The centre of the tongue is white, but moist; the pulse small and hurried; the heat about the pit of the stomach and around the region of the lower ribs great, but lower than natural in the hands, feet, end of the nose and lobes of the ears. These symptoms continue to increase, with raving delirium, till finally he becomes exhausted by exertion, when he suddenly becomes more quiet, but occasionally starts, and perhaps shrieks out, and is suddenly seized with violent convulsions and dies.

*Third.* The third variety of congestive typhus may be distinguished by the following symptoms: vertigo, or great giddiness in the head, chilliness, sickness at the stomach, and extreme weakness of the lower extremities, with great confusion of mind, talking and staggering like one in a state of intoxication. This state is soon changed for a profound stupor, with a pale, livid face. The breathing is deep and interrupted; the pulse small, frequent, and irregular; the tongue white, and generally covered with a slimy saliva; the heat irregular over the body. He is nearly or quite insensible. The hands become tremulous; the tongue fouler. Petechæ now begin to make their appearance on the limbs and trunk. The debility increases rapidly, and the patient sinks into a deep stupor, in which he expires, generally slightly convulsed. The whole period lasts only from twenty to sixty hours, and sometimes a much shorter time.

There are other cases of congestive typhus, with still some additional symptoms, such as a violent congestion of the lungs. These cases generally attack with a chill, and have all the above symptoms, with the addition of such a heavy engorgement of the lungs, as to evince at once an apoplectic state of that organ. The breathing is heavy and quick, the face pale, the lips blue and thin; the pain most violent in the chest, sometimes more so in one side than the other; sometimes both sides are equally painful. The heart seems to drown in its own blood; the extremities become colder and colder, and the breathing more and more difficult. Stupor soon succeeds, and the patient dies



in the first cold stage. This form of typhus pneumonia prevailed extensively in the United States in the years 1813, 1814, and a part of 1815, and we have occasionally met with it ever since that period. It was in those years called the cold plague, but in late years it has been called malignant pneumonia; but it is in every respect a violently congestive typhus, of a highly malignant character, more formidable than even yellow fever itself. Congestive typhus is evidently a disease in which there is not only venous congestion, but even arterial congestion, to an alarming degree. Dissection shows that the brain, the lungs, the liver, the stomach, bowels and kidneys, are all in an excessive state of engorgement and congestion; the balance of circulation is entirely interrupted and broken up, so that the vital organs must be inevitably broken down if they are not relieved by timely and appropriate remedies.

#### TREATMENT OF THE FIRST VARIETY.

It will be recollected that we divided congestive typhus into three modifications; this was for the purpose of making the treatment more plain and easy to be followed. In the milder forms of congestive typhus, the engorgement is not so great, and some reaction takes place in the beginning of the attack. In these cases, as soon as the reaction takes place, and the pulse becomes full, even if the extremities are cool, place the feet and legs into warm water; then take blood from the arm in moderate quantity. The bleeding should be followed by full doses of calomel and other cathartic medicine combined:

*Recipe:* Calomel, twenty grains.  
Rhubarb, ten grains.  
Tartar Emetic, half a grain.

Mix, and give it in sirup, and work off with warm gruel or rice-water. It is necessary that the bowels be freely evacuated; and if need be, to sustain the patient under the operation, some light cordial may be given; or the following medicine:

*Recipe:* Carbonate of Ammonia, twenty grains.

Divide into four powders, and give one every half hour, in sugar, washing them down with a little warm herb tea. After the operation is over, if the pain still continues in the head, a blister should be applied to the back of the neck, and a warm bath to the body; after this, if the extremities are still too cool, a blister should be applied to each ankle, and to the wrists, if the



nands are cool. If there is any soreness in the stomach, a blister should be applied over it, and while it is drawing, the following medicine should be given :

*Recipe* : Spirits Mendereri, two ounces.  
Sweet Spirits Nitre, half an ounce.

Mix. Give a tea spoonful every half hour, in warm herb tea. If the stomach is much sick, a few drops of laudanum should be added to each draught. At the same time, the bowels should be kept open with small doses of calomel and rhubarb :

*Recipe* : Calomel, ten grains.  
Rhubarb, five grains.

Mix. Give one powder every two or three hours, in sirup. If the stomach should be sick, and much pain and soreness in it, or in the bowels, give :

*Recipe* : Calomel, twenty grains.  
Opium, two grains.  
Tartar Emetic, one grain.

Mix, and divide into four powders. Give one every two hours, and use injections to aid the operations. It may be thought that tartar emetic should not be given when the stomach is already sick. But it must be recollected that the sickness proceeds from the inflamed condition of that organ ; and the calomel and opium are both sedatives to a certain extent, — while they prevent the tartar from vomiting the patient, they give it an opportunity to act as a counter stimulant, and tend to the surface, and so reduce the inflammation. The calomel, with or without the tartar and opium, must be continued till the mouth becomes sore, and even after that is effected ; the bowels must be kept moderately open with it for three or four days, to ensure success. As soon as the salivation commences, the skin will become warm and moist. The urine will be lighter colored and increased in quantity. The stools will become green, dark and thick, and lose their offensive odor. The diet, through the whole course of the treatment of typhus fever, should be light, and entirely vegetable. The drinks should always be warm. The room should be kept of an equable temperature, neither too hot nor too cold. The air should circulate freely through the room, but should not blow directly upon the patient.

## TREATMENT OF THE SECOND VARIETY.

In the second variety of congestive typhus, the balance of circulation is greatly interrupted. The surface is cold, and the head affected with vertigo; the pulse is low and weak; there is great difficulty in breathing; the tongue is dry and red. These are the symptoms of this variety. It has already been shown, in the treatment of simple typhus, that blood-letting is of great importance; if so in simple inflammatory typhus, we may truly say that it becomes a desideratum in the worst forms of congestive typhus. But here, great caution is necessary. The lancet must be used, or the patient will die; and if it is used improperly, you may cut him off in half an hour. The first stage of reaction is so exceedingly short, that we often have but little time to use the lancet in, and yet it must not be used except in the reaction; and as the first hours of the attack are the only period in which medical aid is likely to avail anything, we must be prompt and exact, when the attack is obvious, according to the symptoms laid down. While the state of depression, or cold stage, exists, place the patient into a warm bath and use brisk and hard friction upon the skin, having a quantity of ground mustard or salt in the bath. As soon, therefore, as the heat of the skin is restored, and the pulse rises, or even before the pulse rises full and hard, after it begins to react and the breathing is somewhat relieved, open a large orifice in the arm. You will sometimes find it difficult to get the blood to run for some time, as I have several times witnessed; but continue the friction on the surface, and presently the blood will flow freely. Let it run till the patient breathes freely and the pulse rises, which you will sensibly feel by keeping your finger on it. As the blood flows freely, the urgent symptoms will abate, the breathing will become more natural, the countenance will change, and a warm glow will be felt in the face. The congested organs are now partially relieved. If the patient bears the loss of blood well, let it run twenty-five or thirty ounces; that is, a pint and a half or a quart. If you have bled him while in the bath, you will now take him out,—(it should be remembered that, if the bath raises the pulse and warms the patient, he may be removed from the bath before he is bled,)—and place him in the bed; and immediately give him:

*Recipe:* Calomel, forty grains.  
Jalap, ten grains.

Mix, and give it in sirup. As soon as the medicine is taken, apply a large blister plaster over the stomach and abdomen; in one hour give an active injection, to invite the operation of the purgative. If the strength should fail under the operation of the purgative, a little warm sangaree, or wine and water, may be given, to sustain the system. If the medicine operates well, and brings away a large quantity of vitiated fæces, all the violent symptoms will abate more or less. But the fever may rise very high the next day, or even in eight or ten hours. If the patient is a strong, robust man, and the pain in the head is severe, you may bleed him again, letting the blood run till the pain subsides and his pulse becomes soft under the fingers; this will bring it down to ninety or one hundred beats in a minute. You should then give another dose of calomel, and if there is much sickness at the stomach, combine opium with it.

*Recipe:* Calomel, ten grains.  
Opium, one grain.

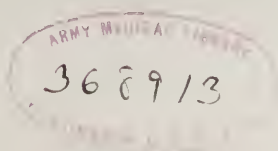
Mix in two powders. Give one every three hours, and repeat the calomel alone, after this, two or three times. Then, if it should not operate, give a dose of castor-oil. If the head should still be affected, apply a large blister to the back of the neck; and if there is pain in the side or breast, apply another blister over it. In the interim of giving the calomel, give the *spirits of mendereri* and *spirits of nitre*, as in the first variety. If the patient is faint, or very weak, under the operation of the medicine, he must be supported by wine or cordials, or the salts of hartshorn given in four or five grain doses, and repeated every half hour. This may be washed down with a little good Madeira wine and water, a little warm. The calomel must be repeated from six to eight times in twenty-four hours, till the mouth becomes sore; for, let us deprecate salivation as much as we please, we must salivate in this fever, or lose our patients very often. For, if the violence of the fever is not broken in the first twenty-four hours, he will die in all probability, if he is not salivated. The calomel and opium may be induced to act on the bowels by giving a small dose of castor-oil, or Epsom salts, once a day, or a tea cupful of senna tea, or a little rhubarb. When the patient begins to spit, if you are careful to keep the bowels gently open, and regulate the diet properly, the patient will, in all probability, get well. All the symptoms in typhus fever should be vigilantly watched, and promptly attended to. As to the use of spirits or cordials in the treatment of typhus

fever of a congestive character, they are, to say the least of them, doubtful remedies, inasmuch that they cannot be relied on; they therefore should be used only as an auxiliary, to keep up the patient till the proper remedies can be used. The cold bath, in any shape, never should be used in congestive fever of any type. The warm bath, however, will often be found serviceable in all the stages of typhus fever. In the stage of collapse, or third stage of congestive typhus, the case is a hopeless one; but, while there is life, something ought to be done. In this case, as a dernier resort, we should give warm cordials, or wine and warm water, and opium; and, if you wish to salivate the patient, large doses of calomel, with small doses of opium, may be given; while you use mercurial frictions on the insides of the arms, legs, thighs, and groins, rubbing it in well and freely, three times a day. Before the renewed friction, every time, it should be washed off with soap and warm water. The drink in typhus fever should always be warm, and as plain as possible. The diet should never be more than what is contained in the drink; such as arrow-root, gum Arabic, rice, barley, sago, milk and water, gruel, bread-water and milk, apple-water, or thin, light soups, (as, a piece of chicken boiled all to pieces, with rice in the water.) Great care should be taken, in convalescence, that the patient does not relapse. Relapses are more dangerous than first attacks, and are more easily brought about in typhus than any other form of fever. The diet should be particularly attended to, and the bowels kept open with some gentle medicine.

#### TREATMENT IN THE THIRD VARIETY, ETC.

After what has been said on the treatment of the second variety, but little remains to be said on the treatment of the third variety. Indeed, all the varieties are only modifications of the same fever, and the treatment only differs according to the symptoms in the first attack and the subsequent reaction. It will be recollected, that, in the first variety, the reaction always comes on without forcing it by external stimulants, &c. In the second variety, it occasionally comes on fully by the energies of the system. In the third variety, it would, perhaps, never come on fully without the aid of those remedies that are calculated to develop it. It does, in some instances, come on partially, but the heat is never perfectly and uniformly

developed. The chest and abdomen may be too hot, but the hands, arms, and legs will always be too cool, and the pulse below the febrile strength. The head will be hot, and a profound stupor, or wild delirium, be present. The bowels will always be costive, and the urine, if passed at all, will be in small quantities and highly colored. The tongue will be white, and soft. The remedies are first to be directed to bringing on reaction. For this purpose, the warm bath, with ground mustard, or salt in it, should never be neglected. Hard and continued frictions should be used while in the bath, and as soon as the pulse becomes fully perceptible or distinctly felt. If you cannot gain on that strength by the bath and friction, you must bleed, and you will find it to rise, generally, on the loss of a few ounces of blood. If, however, it should not, you will lose nothing, for the patient is sure to die if reaction does not take place. But be sure that it is the first reduction of the pulse that you are trying to raise. If it should be the second, it will, in all probability, be the stage of collapse. Then you cannot raise the pulse by bleeding, but your patient will die under the operation, or in a short time thereafter. After you have brought about a reaction, your next effort will be to evacuate the bowels freely, and nothing so effectually does that, in typhus fever, as *calomel* and *jalap*, or *rhubarb*, followed by *castor-oil*, *senna*, or *Epsom salts*. As soon as the bowels are freely evacuated, local bleeding, by leeches or cups, will be proper; succeed them with *blisters*; and *calomel* and *opium* should also be given, with a view to salivate. If you succeed in this, you will save your patient. Small doses of tartar emetic, where the lungs are much inflamed, will always be of service, if judiciously administered. If a cough should succeed to the inflammation in the lungs, in a state of convalescence, equal quantities of *balsam copaiba* and *paregoric* will be found an excellent expectorant. Thirty or forty drops may be given, in mucilage, for a dose, and repeated every five or six hours. After what has been said heretofore in relation to diet and drink, nothing more need be added; nor in relation to the temperature of the room, nursing, &c. The mouth should be kept clean, and the teeth free from sordes, so that they may not suffer by the salivation.





## YELLOW FEVER.

THIS is a fever of high grade and great malignity. It has prevailed in different parts of the world, from the earliest medical accounts of disease. Almost every territory in which it has committed its ravages, has given it a new name; it, therefore, is as gorgeously arrayed with titles as the mightiest monarch of the East. From the depredations it has committed in the West Indies and on the American coasts, it has been called the St. Domingo, Barbadoes, Jamaica, and American fever; and from its fatal visitations on the Guinea coast and its adjoining islands, the Bulam fever. In British India it is distinguished by the name of the Jungle fever, and still further to the east, by that of mal de Siam. Nearer England, in the lowlands of Hungary, and along the south of Spain, it is called the Hungarian or the Andalusian pestilence. From its rapid attack on ships' crews, that are fresh to its influence, the French denominate it *fièvre motellotte*, and the Spanish and Portugese call it *vomito prieto*, or black vomit, from the slaty or purplish and granular saburra thrown up from the stomach in the last stages of the disease. While its ordinary course is marsh lands, it has frequently been named *peludal fever*. Its more common name, however, at the present day, and for the reasons already assigned, is *yellow fever*. Though it may be greatly interesting to trace its origin and progress, and the treatment used by a great number of writers upon it in various parts of the world, yet we are more especially concerned in its character and treatment, as it has appeared in the United States. Our object is not to theorize and speculate on the origin or causes, remote or proximate, of any disease. This is designed entirely as a practical work. We, therefore, proceed to describe the yellow fever as it has prevailed, at different times and in different places, in our own country, according to the accounts given of it by Dr. Rush, as it prevailed in Philadelphia in 1793, 94, 95, and 97, and occasionally till 1805; and according to Dr. Cartwright, who has given us an able account of it as it prevailed in Natchez and Washington, Mississippi, in 1823 and 1825, as well as some account given by Dr. Monett. We shall also draw from Dr. Jolinson on tropical climates, Jackson, Lynd, and many others; so that we shall be able, from these sources, and from some small knowledge of it ourselves in 1826, when there were some sporadic cases in New Orleans,

and I having had an attack of it ourself, to give an account of it that will comprise all the prominent facts belonging to the disease. We acknowledge that *Dr. Cartwright's* account of it, as it prevailed in Natchez, in 1823, is the fullest and most satisfactory of any we have seen, though Dr. Johnson is very plain and full. But Dr. Cartwright's post mortem examinations are more thorough than those of any man who has gone before him. We, therefore, shall extract largely from him. Yellow fever is like all other fevers in its manner of attack, as well as in the violence of its symptoms. In some cases, according to Dr. Rush, the attack varied but little from a common tertian fever; in others, it commenced with hiccough only; in a majority of cases, there was sickness at the stomach and vomiting, sometimes of bilious matter, and at others of a white glary fluid; and at other times, a dark substance was thrown up, resembling coffee with the grounds mixed with it. Sometimes the bowels were loose, and sometimes constipated, and so with all the secreting organs, the kidneys, liver, bowels, lungs, &c. The skin was generally dry and cool, but in some cases it was moist and cool. The eye for the most part was red and tinged with yellow, and presented a keen, piercing, anxious look, though in other cases it was dull and listless. The coolness of the surface lasted an indefinite time, from six to twenty-four hours, before reaction or fever ensued. When that took place, the febrile heat was great, and the pain in the head, back and limbs, insupportable; this stage would last from six to twenty-four hours, and then a remission would take place, and most commonly a fatal one, which terminated in death. But either the fever differed in violence and characteristic symptoms from that which prevailed in Natchez, in 1823 and '25, or else Dr. Cartwright was more happy in his observations and descriptions of it in all its stages than Dr. Rush was; for he has certainly given us a more lucid and satisfactory description of the disease than Dr. Rush, or any other author that has written on yellow fever, either in the East or West Indies, or the United States, has done. I shall, therefore, follow Dr. Cartwright's description more closely than that of any other writer.

Yellow fever, like all other fevers of a malignant character, presents three stages, which we shall notice in their proper order, describing and giving the treatment of each stage as we have done in all other forms of fever.

## FIRST STAGE OF YELLOW FEVER.

The symptoms of the first stage of yellow fever, as it appeared in Natchez, in 1823, were manifested by an intoxicated appearance of the countenance, and a remarkable exhilaration or depression of spirits, and were soon ushered in by a contemporaneous sensation of heat and cold. The patient, though complaining of great internal heat, was often found under one or more blankets, which he would not permit to be removed; and his skin, which to him felt excessively hot, was often actually cold to the touch. An inclination to yawn, a soreness of the flesh, an aching of the bones, and at length flatulency of the stomach, with great weight and oppression about the pericardium, take place, followed by pain in the head, stomach and back. But the pain in this stage is never so great as in that of reaction; indeed, it is sometimes entirely absent. It is remarked by a very intelligent and accurate observer of the disease, *Dr. Gustine*, that the most fatal cases are those which are attended with the least pain. A general reaction never takes place in these cases. The disease was always more fatal when the excitement did not become generally evolved, and hence pain, a consequence of increased sensibility which is necessarily associated with a diffused excitement, never occurred. A want of thirst also attended the disease in its first stage. The tongue is then seldom much furred, but its edges are often red; sometimes, in the most malignant cases, it presents no unusual appearance. The patient, in the first and second stages, is as anxious about living, as he is indifferent and careless of life in the third or last stage. As the first stage advances, a violent vomiting comes on, attended by spasms in the legs and arms. A slight perspiration, unequally diffused, bedews the skin, which will, however, dry up in a few minutes, and again appear, as if forced out by the violent exertions of vomiting. The broken reaction is now the most evident, as the head and breast are burning hot, and the extremities cold. The temporal arteries throb violently; the pulse at the wrist is small and feeble. By placing the hand on the abdomen, a strong pulsation can be felt. The patient becomes more restless, and suffers more pain as the fever spreads itself over the system. At length a general reaction takes place. This is the beginning of the second stage of the fever. This stage, however, may not take place, owing to improper medical treatment, or the extinction of the apyrexial state, which constitutes the third or last

stage When the fever is about to make this unfortunate termination, the excitement, which has spread itself only half over the system, gradually abates, and leaves the patient apparently with no fever. The duration of the first stage is from one to twenty-four hours,—so say Dr. Johnson, Lynd, Jackson, Rush, Cartwright and others. It can readily be distinguished from the second stage by the partial evolution of heat in the one, and the general diffusion of heat over the whole surface, in the other. The patient is always found covered up with bed-clothes in the first stage, but in the second and third stages he generally prefers to lie naked.

#### THE SECOND STAGE OF YELLOW FEVER.

The second stage is marked by a general reaction and a diffusion of great heat on the surface, with violent pains in the head, back, and limbs. The eyes are red, or of a yellowish red, and either dull-looking or are peculiarly wild and ferocious. The pulse becomes strong and full; all the chilly feelings disappear; he throws off the bed-clothes, calls for cold drinks, and tosses himself from side to side in bed, or goes from one bed to another. This stage is clearly marked by a uniformly hot surface, and a diminution of action in all the secreting organs, as the skin, liver, and mucous membranes; also by great heat and dryness of the skin and mucous membranes, and greatly increased energy of the arterial system.

#### THIRD STAGE OF YELLOW FEVER.

The third stage is announced by the heat of the surface being diminished, but not by the patient's sensation of heat having proportionably diminished; by a slow, irregular respiration, or even when the number of respirations differs but little from the healthy state, by the chest rising and falling by steps, as if the lungs had to make two or more efforts to draw in the air, and two or more to repel it again; by the expiration being often cut short, or interrupted, in consequence of a sudden inspiration taking place at any one of these steps, before a natural collapse of the lungs had occurred, and *vice versa*; by the slowness of the pulse, the wildness of the look, the alienation of the mind, the confidence of a speedy recovery, yellowness of the skin, accession of strength, the black vomit, hemorrhage from the mouth and



nose, and sometimes from the eyes and ears. The above symptoms are all the precursors of speedy dissolution. In the above detail of the symptoms of yellow fever, we do not presume to say that we have given all the minutiae of the symptoms. For, in yellow fever, as in all other fevers, the symptoms in their minutiae will vary according to the particular states of the system and conditions of the body at the time of the attack. But we presume we have given the prominent symptoms sufficiently clearly and distinctly to characterize the disease, so that it may be readily distinguished from any other form of fever to which the citizens of the United States are liable.

*The prognosis in this fever.* Yellow fever, in any of its forms, is confessedly a highly malignant and dangerous fever. Few or no persons recover in whom the first stage of this fever is not succeeded by a general fever, or reaction, and the sooner the fever passes into the second stage, the greater the chances are of recovery; and still more so if the second, or stage of reaction, lasts long enough to enable the physician to restore to their proper action the skin, the liver, and the kidneys; for it is impossible to do this in the ataxic or first stage of the fever. In some cases, the second stage of the fever never appears, but the disease rapidly passes from the ataxic fever, or first stage of broken excitement, into the third or last stage. In these cases, death is inevitable. It is stated by Drs. Cartwright, Gustine, and Tooley, that persons laboring under venereal disease, or under salivation, when attacked, almost invariably died, in the epidemic of 1823, in Natchez; also those who were attacked while in a state of intoxication. Of the whole number that perished in that epidemic, Dr. Tooley estimates the intemperate at more than one third. The more robust and healthy the person, and the nearer the prime of life, the more danger; while the feeble and delicate in constitution are more apt to recover. Those who change their mode of life from a temperate to that of taking stimulants, in order to keep off the disease, are almost certain to be attacked and die. The black vomit, which is thrown up near the close of the disease, is peculiar; it will not mix with water and remain so, but will separate from it and leave the water clear; it bears no traces of bile. The patient either dies convulsed, or drops down dead, (if he is up,) without a struggle. Before giving the treatment of the different stages of this fever, I deem it best to give the post mortem appearances, which will more clearly point out the propriety of the course of treatment which I shall give.



## ANATOMICAL POST MORTEM APPEARANCES.

I shall give the post mortem appearances as given by Dr. Cartwright, because he has not only given all that others have given before him, but pointed out several others, for which he deserves great applause from the profession, and deep and lasting gratitude from the community generally. The appearance of the stomach varied very much in different cases. In some it was diseased, in others it was sound, and in a third but lightly effected. This determined Dr. Cartwright to pursue his autopsic researches further. He therefore extended his examinations to the abdominal viscera, the brain, the spinal marrow, the nerves, the kidneys, the bladder, the muscular parts of the system, the lungs, &c. It was then that he discovered the state of the ganglions and the ganglionic nerves, and the inflammation of their investing, or perivascular, highly diseased; the membranes immediately investing these ganglions and celiac plexuses were of a deep scarlet, and, in some cases, of a black color. This inflammation was not confined to the tissues immediately investing the nerves, but extended to the neighboring tissues, especially of the semilunar ganglion. The whole of the membranes, including the nerves called the solar plexus, lying upon the celiac and superior mesenteric arteries, were black with inflammation. The cellular substance investing the hepatic plexus, as it extends on the hepatic artery and vena portarum; the splenic, the mesenteric and venal plexus, together with the cardiac and pulmonary plexuses, were found to be of a scarlet color. In a word, the delicate tissues investing the whole of the ganglionic system of nerves were more or less inflamed. Of twenty subjects of the yellow fever of Natchez, in 1823, the ganglionic system of nerves were minutely and closely examined in seventeen cases. In the other three they were not. In these seventeen subjects, there was not a case in which the investing membranes of the ganglions and their plexuses were not highly inflamed. In all these examinations after death, Dr. Cartwright took notes at the time they were made, and many of them were witnessed by Drs. Gustine, Denny, and Tooty. The membranes behind the great vessels of the lungs, investing the posterior pulmonary plexus, and the membranes on the anterior part of the aorta, down to its bifurcation, but particularly those about the celiac artery, investing the semilunar ganglions, were always of a deep scarlet or

black color, which, like the color produced by indelible ink, defied ablution. The appendix of the diaphragm was also, in most cases, very much diseased. The psoas muscles underwent a great change from the healthy condition. In some cases, these muscles were of a black color, and easily torn. The fleshy part of the iliacus inturmus, where it arises from the transverse processes of the last vertebra, and from the hollow of the ilium, was diseased, in common with the psoas muscles. Dr. Cartwright also examined other cases of yellow fever, after death, in other years, and found the nervous system diseased, like those in 1823; so that we cannot be at a great loss to decide upon the proper mode of treatment in this formidable fever. Indeed, it would be difficult for any man who had any just pretensions to the science of medicine, after being in possession of the knowledge that Dr. Cartwright has thrown upon this disease, by post mortem laid down by the doctor in this mode of practice than that however, the medicine according to circumstances; but always keeping in view the great end of counter-irritation, and equalizing the action both of the nerves and circulating system.

#### TREATMENT IN THE FIRST STAGE OF YELLOW FEVER.

All who carefully examine the account of the appearances of the system after death by yellow fever, must readily see that the remedies used by Dr. Cartwright are well calculated to fill the indications in yellow fever. Though they differ from those used by Dr. Johnson and others in the treatment of this disease, yet, if we take into consideration the difference between the post mortem examinations made by Dr. Cartwright and those who have gone before him, we can see clearly why, upon pathological principles, their practice should differ. It may, however, be possible that the disease possessed modifications, or grades, in one place, which differed from those of another; or else those physicians did not extend their examinations with that minuteness which Dr. Cartwright did. Be this as it may, we have to do with the yellow fever of the United States, and the post mortem appearances here must modify and govern the practice here. Believing, then, as I do, that Dr. Cartwright's practice is well founded, according to the autopsic presentations; and having had the fever myself, in its sporadic form, in New Orleans, in 1826, and having managed my own case upon the principles laid down by Dr. C.; I feel no hesitation in recommending the prac-

tice, and shall give it as nearly as I can; and, by simplifying the language and prescriptions, make it intelligible to all readers.

The first great object in the treatment of yellow fever is to relieve the ataxic fever, or the broken balance of excitement, which keeps up an irregular chill, in which state of the system those highly inflammatory conditions of the nerves and ~~apparatus~~, viz., coats, as well as the muscles, and ~~the liver~~ <sup>liver</sup>, kidneys, &c., were laid. Now, it is the stomach, bowels, liver, kidneys, &c., were laid. Now, it is most critically and philosophically ~~that~~ that tartar emetic is one of the most efficient remedies within our possession in removing inflammation, the lancea not excepted; to this all well-informed writers agree. The French physicians give tartar emetic in large doses to remove pneumonic inflammation. The author has very frequently witnessed its good effects in these and other cases of highly inflammatory action. Now, it matters not, in point of ~~theory~~ whether tartar emetic acts directly as a stimulant and so diffuses and equalizes the circulation, or whether it first acts as a counter-irritant and anti-inflammatory remedy, and, by so doing, causes the engorged vessels to throw out the blood into the general circulation. So it is, the effect is that of not only equalizing the excitement, but of permitting that excitement to rise to a height that calls for the remedies which are further calculated to overcome the deleterious effects of the primary mischief which would follow, if the tartar emetic had not been given. We forbear to theorize, for that is no part of our business in this work; facts are what we want, and facts are what we profess to state. Then, in the first stage of yellow fever, or in that which consists in an ataxic or crippled reaction, when the blood is unequally determined, the heat unequally diffused, sensation impaired, and secretion suspended, there is no other remedy, or combination of remedies, that will produce such decided effects as tartar emetic in full doses.

*Recipe:* Tartar Emetic, twenty grains.  
Ipecac, five grains.

Form four pills. Give one of these every hour, till full vomiting is produced. Warm diluents should be freely taken to aid its operation. When the tartar is slow in its effects, it may be aided by the warm bath, with mustard or salt in it, and constant and hard friction with the hands, flesh-brush, or a piece of flannel. It must be borne in mind, that the effects of tartar emetic are not so soon apparent in this fever as in many others. Nor is the vomiting simply the only effect we expect to produce by it. It

is frequently an hour or more before the system begins to feel even the emetic effects of it. But this is not the permanently good effect of our remedy. The first salutary effect which is perceived is a sensation of heat which ensues; the temperature of the skin becomes more uniform, and, as the excitement is brought ensue, and the system will feel restless, till at length great distress will regain, in some measure, its organic sensibility. Some one or more of the great secreting organs will now take on a secretory action. The nausea, the anxiety and retching, will soon give way to full vomiting; first of phlegm, and then of bile. This, to a spectator, will be an alarming period in the disease, and most distressing to the patient. In some cases, the powers of life will seem almost to give way under its influence; but this is delusive. It is a joyful appearance to those who well understand the object they wish to effect. The vomiting will presently cease, and the patient will likely sleep a short time, when he will be bathed in perspiration. These are the first and happy effects which tartar emetic produces on the system in yellow fever. But these happy effects need not be looked for, unless the medicine is given in full doses. Reaction now soon takes place, and the disease passes into the second stage. Now the action is general, and has lost its ataxic character. It is accompanied with a hot skin, a violent pain in various parts of the system, and a full, strong, close pulse. It may here be remarked, that tartar emetic will not alone always puke in yellow fever; the stomach seems to be paralyzed, and requires an additional stimulant to rouse it into action. In such cases, as before stated, the hot bath, aided by sinapisms to the legs, abdomen, and stomach, will aid it; but a tea spoonful of ground mustard, given in a glass of warm water, and repeated once in twenty or thirty minutes, will greatly aid the tartar in its operations. When the reaction takes place fully, the patient will complain of the most excruciating pain and suffering. The disease now comes out openly, and shows itself by fever and pain; for although the patient may fancy himself worse, yet he is far removed from that danger from which his system has just emerged, and now requires a bold use of the lancet, and other remedies, hereafter to be mentioned, to restore him to health. But it is not always that tartar emetic will produce vomiting, even when aided by all the auxiliaries that can be afforded. In those cases, in the first stage, in which the skin is cold, and even at the time when the reaction is ataxic, and



scarcely perceptible, the secreting organs as if they were palsied, with the secretions entirely suspended, or strangely restricted, the stomach irritable, and little or no pain complained of, tartar emetic in full doses ~~was~~ <sup>it may appear,</sup> tartar emetic, in such cases, <sup>was</sup> a powerful stimulant; it brought out the excitement, heated the skin, raised the pulse, allayed the irritability of the stomach, ~~restored~~ <sup>restored</sup> susceptibility to the organs, and finally awakened one or more of them,—the kidneys, skin, &c.,—to active secretion.” To have this effect, it should be given in doses, from three to ten grains, every one, two, or three hours, dissolved in a small quantity of water, or given in pills. When the excitement has been thus developed, the medicine should not be omitted at once, but gradually diminished, by giving smaller portions at longer intervals. Should a vomiting ensue before the skin has its heat and excitability restored, bile will rarely be evacuated. In this event, another dose of the medicine should be given immediately, and repeated whenever great nausea ensues. Dr. Cartwright says: “I have rarely seen this practice fail, in such states of the system, to check the vomiting and heat the skin, when mustard and blisters had failed.” It must be remembered that those which are called cold cases, are the worst or most hopeless. In the epidemic of Natchez, in 1823, Dr. C. used the hot bath, frictions, sinapisms, and blisters, besides various internal stimulants, to bring on reaction, but the combined influence of all these remedies did not have the same beneficial effects as tartar emetic alone. But in some cases of this kind, particularly in hard drinkers, it fails to produce secretion, and develop excitement. Dr. C. says, “that it may be imagined by men in their closets, that these are cases of congestion only, which congestion should be readily removed by small and repeated bleedings, combined with internal and external stimulants.” The truth in the case is, that the malignant nature of yellow fever does not depend entirely on the peculiar nature of the congestion attending it. In common congestive typhus, I know the pulse may be raised by bleeding, if it is judiciously done. But in these cases, in yellow fever, if blood be taken away, even should the patient not immediately sink under it, so far from reaction being produced, the blood-vessels lose more and more of their contractile power, stimulants impart no strength; the warm bath and rubefacients produce no more effect on the skin than if they were applied to inanimate matter; the organs become more and more paralyzed



the sympathies more and more deranged; and the whole system appears as if it were divided into different parts, one not depending upon another, and each having in it the principle of life diminished. ~~Instead then of using blood-letting in such cases,~~ produce secretion and develop excitement. He says, "Although tartar emetic was sometimes inadequate to produce these desirable effects, in the cold cases, it scarcely ever failed to be eminently serviceable in the first stage of cases of a less malignant nature. The earlier it is given in the first stage of the disease, the better. If given in sufficient doses, it shortens the first and fully develops the second stage, which is always a desideratum in yellow fever. But, in despite of all that can be done in some cases, the second stage never can be developed, but the disease rapidly passes from the first stage, or stage of broken excitement, over to the third or last stage, or that of collapse. It is hardly necessary to say that all such cases prove fatal. It must be kept in mind, that, in order to be successful, according to Dr. Cartwright, the puking must not be moderate or gentle, but must be effectual and powerful, and must continue till the broken balance of circulation is removed, and a reaction fully established. If the tartar fails to operate, let it be aided by ground mustard given in warm water. The mustard bath, with frictions and cataplasms, should be used as auxiliaries. I shall now give the treatment of some other physicians, in the first stage of yellow fever.

Dr. Benj. Rush, as all physicians in America should know, after trying various modes of practice, and failing in them all, finally adopted the plan of active purging with calomel and jalap. He first gave ten grains of each, and repeated every four or six hours, till free purging was induced; and when he thought the pulse would bear it, he bled, and repeated it from day to day, till his patients recovered or died. Other physicians of Philadelphia did not purge at all, neither did they bleed, but gave wine and bark, and strong aromatics, both by the mouth and by injections. They used the cold bath in conjunction with their remedies. I will only say, the stimulating treatment did not succeed. All the medical world knows that Dr. Rush's plan of treatment was most successful. But yellow fever puts on so many faces in different countries, that the practice in one country and in one epidemic will not suit exactly in all others. This has been the prevailing opinion among physicians. Now, whether it is really because the epidemic differs so widely in one place, or at one

time, from that of another, is a question. I am disposed to believe that the greatest difference grows out of the opinion of physicians in relation to it, and not that there is so great a difference actually in the specific disease, *yellow fever*; some from ignorance, and in order to support previously conceived opinions, and some from other causes. There are those in the profession who never did nor never will have correct pathological opinions, if they were to live a thousand years, such men, however, talk more than those who can render a reason for what they do; nevertheless, they do much harm to the profession, and infinitely more to the community. From such spots in the profession much of the difference of opinion and treatment in yellow fever, as well as many other diseases, has been sent abroad.

I will now give the treatment of Dr. Johnson, who has written so ably and truly professionally on the diseases of tropical climates. His practice can be given in a few words. In the first stage of yellow fever he gave calomel and opium, — (twenty grains of calomel and one of opium,) — to allay the irritability of the stomach, then repeated the calomel every four hours, till the bowels were freely evacuated. He also used the warm bath occasionally, when the surface was very cold. After the reaction took place, he bled freely, and continued the calomel, with other purgatives, till a free salivation took place. He then gave other gentle purgatives, till convalescence commenced. Then tonics were given, such as wine and bark; now it would be quinine, alone, perhaps. Some of these modes of practice, viz., the ptisan practice of the French, the stimulating practice of others, and the mercurial and bleeding practice of Dr. Johnson and Dr. Rush, and the tartar emetic practice of Dr. Cartwright, constitute the whole catalogue of practice of the medical world, (with here and there a modification,) in the first stage of yellow fever.

#### TREATMENT IN THE SECOND STAGE.

The treatment in the second stage is nearly the same as given by Drs. Johnson, Rush, and Cartwright; but the mode of practice, as will be observed by a careful perusal of the previous pages, by which the second stage is made to develop itself, was very different. But, when it is developed, the symptoms are the same in all countries, and at all times, though they may vary in violence. This stage is manifestly the ataxic, or broken

state of excitement, giving way to a general glow over the whole surface. The skin is hot, and dry: the pain in the head, back, and limbs, and sometimes in the chest and abdomen, is most excruciating and intense; the thirst is intolerable and insatiable, and the pulse full and strong. In this stage of the fever and condition of the system, Dr. Rush would bleed freely, Dr. Johnson more freely, and Dr. Cartwright most freely. Each of these eminent physicians would be regulated by the strength and habits of the patient. But, in every case, blood should be taken to the entire relief of the violent symptoms. In my own case, I bled myself, in the reaction, at least three quarts, to the relief of all the aggravated symptoms of the first reaction. The bleeding should be immediately followed by large doses of calomel; twenty grains, every three or four hours, till three or four doses are taken; to be followed by castor-oil and turpentine, senna-tea, jalap, or rhubarb. These should be aided by injections, till the bowels are freely evacuated. The balance of the cure may be accomplished by a dose of calomel once a day, worked off with some of the above medicines. I deem it unnecessary to enumerate the practice of twenty, or more, physicians, and many of them of great eminence; for they all, more or less, who are worth quoting, follow the same mode of practice, with but little variation, except where locality or topography of country make it necessary; and these things always did, and always will, modify the practice of medicine the world over.

#### TREATMENT IN THE THIRD STAGE.

The symptoms of this stage of yellow fever are, perhaps, the most delusive manifestation which appears in any form of fever that has ever appeared on earth, affording at least one of the evidences that it is a fever *sui generis*. When this stage comes on, the patient experiences a total calm from all his violent symptoms; he feels careless about his condition. From just before feeling extremely weak and prostrate, he suddenly feels strong; his eyes either look dull, or, more commonly, have a keen, piercing look, and are streaked with red and yellow; he now spirts up the black vomit, with a jerk; blood presently oozes from his mouth, nose, and, sometimes, from his eyes, and ears. The skin, which became yellow in the second stage, now frequently changes to an olive, or brownish green; he walks about the room in a rag; or sits calmly on the side of the bed,

and is cheerful; his bowels become constipated, and his pulse weak and compressible, and his skin cool. In some cases, he raves with madness, and uses violent exertions, till he falls dead. In other cases, he dies calmly. In one case, perhaps, in fifty, recovery has taken place from this state, so that it is not altogether a hopeless condition. Here purgatives may be continued, especially when they have not been freely used in the second stage; and it is in these cases that hope, if any, is to be cherished. The purgative plan, then, with a little wine and water, constitutes all that we can do in this stage. But, such cases are generally considered hopeless; most certainly so, if the third stage is ushered in without reaction having been fully established. The diet in yellow fever should always be light and thin, and the drink, in all cases, a little warm, and, if lightly acidulated with lemon, will be more agreeable. The room should be kept well ventilated, and the ejections speedily removed. Good nursing is very important in this fever; without it but little may be expected.

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## INFLAMMATION OF THE LUNGS.

INFLAMMATION of the lungs is known by the following symptoms: an obtuse pain in the chest; a constant difficulty of breathing, which is alleviated by an erect position; the face and lips generally tumid, or purple; cough, with moist expectoration, mixed with blood; and the pulse is usually soft and quick. Inflammation of the lungs may be divided into simple inflammation, with a regular but violent fever. There is, in this form of the disease, but little expectoration in the beginning. The second form of this disease is more aggravated in its character, and resembles a typhus fever in many of its symptoms. The debility is extreme, from an early period of the disease. This form of the disease is often epidemic. The third variety differs from the two former, by the fever being more mild, and the expectoration more copious. This variety of inflammation of the lungs occurs most frequently in weakly constitutions; but the first variety is most frequent, and is often mistaken for pleurisy; but it may be distinguished from it by the following symptoms: in pleurisy the face is, comparatively speaking, but little flushed, and not much swollen; the pulse is harder, and more resisting under the finger; the cough is less violent, and



from the beginning to the end, there is but little, if any, expectoration. In pleurisy the pain is fixed in one place; but, in inflammation of the lungs, the pain shifts from place to place; from one side to the other, and from the breast to the back; and when the lower point of the right lobe of the lung is affected, the inflammation is not unfrequently communicated through the diaphragm to the liver, occasioning pain under the edge of the ribs. Then the expectoration is yellow. The causes of inflammation of the lungs are those of inflammation in general, but particularly an excessive exertion of the lungs, or a sudden exposure to cold when the system is heated. The cold may be applied to the surface generally, or to any part of the system, as the skin, mouth, stomach, or feet. The robust and plethoric are more liable to inflammation of the lungs than the feeble and delicate. It occurs more frequently in cold than hot weather, and when there are sudden changes from heat to cold, or the reverse. Sometimes it is induced by repelled eruptions, and at others by noxious inhalations. To the latter cause the frequency of this disease is ascribed in the vicinity of eruptive volcanos. The first symptom of inflammation of the lungs is, a cold, shivering sensation, which may continue for an indefinite period of time, after which a fever rises, with more or less violence, according to the violence of the cold stage. With this fever there is great pain in the head; the urine is small in quantity, and highly colored; the pain in the chest occasionally comes on with the first fever, but more commonly it does not take place till the second or third day; the cough is a short, dry hack, and the pulse is variable. In some cases, it is hard and strong, and in others it is soft and compressible; but, as the disease progresses, in all cases the pulse becomes soft and compressible, and sometimes fluttering. Delirium sometimes occurs, and is an unfavorable symptom, except where it alternates with the febrile paroxysms; then it is not so bad a symptom. In favorable terminations of this disease, the symptoms all begin to abate on or before the seventh day. But when none of the symptoms abate before the seventh day, the case is apt to terminate unfavorably. Inflammation of the lungs, like other local inflammations, terminates in various ways, as, by effusion, that is, a free expectoration of mucus from the lungs, or by suppuration — the formation of an abscess, and discharge of matter; by gangrene or mortification, or by hemorrhage, which is induced by an increased determination of blood to the lungs. The most



favorable termination is by effusion and copious expectoration. Coagulable lymph is sometimes thrown out upon the surface of the lungs, and by it adhesions take place between the lungs and pleura of the ribs. Sometimes collections of matter take place in some parts of the chest. Sometimes the extremities of the blood-vessels give way, and more or less blood is discharged in the sputa. This is rather a favorable symptom, for by it the engorgement of the lungs is relieved, and a speedy recovery ensues. But a hemorrhage from the nose is equally salutary to the lungs, and greatly preferable, because the lungs suffer none of those lesions, (though they may be small,) that so often attend on hemorrhage from that organ. Shivering, or cold fits, with remission of pain, attended by perspiration and a low pulse, indicate the formation of an abscess in the lungs. If gangrene or mortification has taken place, the pulse sinks, the debility rapidly increases, and the eyes are fixed with a ghastly stare. These are fatal symptoms.

#### TREATMENT

Inflammation of the lungs is a formidable disease, and requires active treatment. No time should therefore be lost in the use of the lancet. The pulse may be depressed from an excessive engorgement, but we must not be deterred from the use of the lancet on that account. There is no condition in which the system can be placed, where the lancet is more admissible on a depressed pulse than in inflammation of the lungs. A large orifice should be opened in the arm; keeping the finger on the pulse, it will be found to rise as the blood flows, and it should run till the pulse not only rises, but again becomes soft under the finger, and a perspiration breaks out on the forehead and face; then stop it, and immediately give the following:

*Recipe:* Calomel, ten grains.  
Rhubarb, ten grains.  
Tartar Emetic, one grain.

Mix, and divide into four papers. Give one every hour, till all are taken. As soon as they have operated freely on the bowels, if the pain and difficulty of breathing continue, bleed again, if the pulse will possibly bear it; then apply a large blister plaster over the most painful part, and repeat the above purgative, and in conjunction with it, give the following medicine:

*Recipe:* Tartar Emetic, two grains.  
Salts Nitre, twenty grains.

Mix, and dissolve in eight table spoonfuls of water. Give one spoonful every half hour. If the patient should vomit, protract the time a little; but if no nausea or vomiting should occur, then give the medicine oftener. Tartar emetic is our best medicine in inflammation of the lungs. I have given one grain every half hour, and repeated it for forty-eight hours in succession, without nauseating the stomach in the least. But as soon as the inflammation begins to subside, nausea will come on, and the dose must be lessened. If the bowels should not be kept in a sufficiently soluble state by the tartar, give a dose of Epsom or Rochelle salts. If the tartar should produce much sickness at the stomach, and the inflammation does not give way, give the following medicine:

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, two grains.  
Pulv. Opium, one grain.

Mix well, and divide into six powders. Give one every hour in some warm tea, till a free perspiration is induced, and keep it up three or four hours. As soon as the patient begins to cough up phlegm, give the following expectorant:

*Recipe:* Sirup of Squills, one ounce.  
Cox's Hive Sirup, half ounce.  
Wine of Ipecac., half ounce.

Mix them together, and give a tea spoonful in warm barley-water, rice-water, or slippery-elm tea, and repeat every hour; this will promote the expectoration, and in proportion to the reduction of the inflammation, so will be the increase of discharges from the lungs, till they are entirely relieved. During the whole treatment, the bowels must be kept open with small doses of calomel and some mild aperient combined.

*Recipe:* Calomel, sixteen grains.  
Aloes, sixteen grains.  
Rhubarb, sixteen grains.  
Tartar Emetic, two grains.

Mix, and form sixteen pills, two of which may be given every three or four hours, to keep the bowels open. The drink, in inflammation of the lungs, should always be a little warm, and of a mucilaginous quality, such as gum-Arabic water, flax-seed tea, slippery-elm tea, marsh-mallow tea, rice-water, barley-water, &c. The diet should be light: in general, little more will be required than some of the above drinks, or light soups or gruel, tea and soft toast, &c. Great care should be taken not to

expose the patient in convalescence. During the illness, the room should be well ventilated, but a current of air should not strike the patient.

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## PLEURISY.

PLEURISY is characterized by an acute pain in the chest. This pain may be seated in the breast, back, or either side, for the pleura lines the whole cavity of the chest. The pain is increased by a deep breath; there is a difficulty in lying on one side; the pulse is hard, sharp, and quick; the cough at first is dry, and is increased by the effort of coughing. Pleurisy is an inflammation in the membrane that lines the ribs, which membrane covers the outer surface of the lungs also. It is called pleura; hence the name, pleurisy. It matters not in what part of the pleura the inflammation is located,—in the lining of the ribs, or on the surface of the lungs, or the upper surface of the diaphragm,—inflammation in any part of this membrane is pleurisy. Pleurisy, like inflammation of the lungs, is produced by exposure to cold, or a sudden check of perspiration. Like the most of febrile diseases, pleurisy commences with a chilliness, succeeded by fever, heat, and restlessness. Let the pain be seated where it may, the expirations are less painful than the inspirations; the pulse is hard, strong, and frequent; the tongue is covered with a white coat; the cough is at first dry and suppressed; there is sometimes a bloody mucus spit up, showing that the inflammation has extended to the substance of the lungs. Like inflammation of the lungs, pleurisy may terminate in resolution, suppuration or gangrene. Resolution or expectoration is the most usual, as well as the most favorable termination. Gangrene rarely occurs, but suppuration is not uncommon, in which case, if the abscess should not point outwardly, the matter will collect internally, and constitute what is called an emphysema; the formation of pus is indicated by the cessation of pain, succeeded by a shivering or chilly sensation. In some cases, a sense of fluctuation can be felt. This termination is far more frequent when pleurisy succeeds from external injuries, than when it proceeds from the ordinary causes, as above enumerated.

### TREATMENT.

As pleurisy is a disease of active inflammation, we should not hesitate to use the lancet freely; the blood should be taken from

a large orifice in the arm, and the quantity taken should be regulated by the effect. The patient should become faint, and a perspiration break out, before the blood is stopped. The bleeding should be followed immediately by a brisk cathartic; and, in order that the liver may be excited into free action, the following may be given:

*Recipe:* Calomel, twenty grains.  
Aloes, ten grains.  
Rhubarb, ten grains.

Form six pills. Give three first, and the other three in two hours. Work them off with gruel, without salt in it. As soon as they are done operating, if the pain continues, apply a blister plaster large enough to cover the pain, and give the following powders:

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.  
Pulv. Opium, one grain.

Mix, and divide into six powders. Give one every hour, in balm, or some other herb tea, warm. The patient should drink freely of the warm tea while taking the powders, so that a free perspiration may be produced; he should be kept covered up closely during this time. When the blister has drawn freely, and he has taken all the powders, he should then repeat the purgative pills, as above prescribed. If they should not operate freely in three hours from the time the last is taken, a full dose of castor-oil should be given, or half a pint of strong senna tea, with half an ounce of Rochelle or Epsom salts dissolved in it, half a tea cupful of which may be given till free purging is produced. If the pain and fever continue after this, and the pulse will bear it, bleed again, and give five grains of Dover's powder every hour, till the pain is relieved. If warm teas are taken during the exhibition of the Dover's powders, perspiration will be induced. This should be again followed by a dose of oil, or senna tea and salts. This course of treatment may be pursued from day to day, till the pain and fever are subdued, which will take place in three or four days, if not in less time. As soon as the inflammation is subdued, the patient will begin to cough and spit; then the drinks should be mucilaginous, and the following expectorant given.

*Recipe:* Sirup of Squills, one ounce.  
Cox's Hive Sirup, half an ounce.  
Wine of Ipecac., half an ounce.

Mix, and give a tea spoonful every two or three hours in some mucilaginous drink, so as to keep up a free expectoration, and

continue it till the patient coughs and spits no more. During the treatment, the diet should be light and the drink warm; the skin should be kept clean and the pores open, by a warm bath, if necessary. Great care is necessary, in convalescence, lest the patient relapse. When the disease terminates by suppuration, and matter is collected in the chest, it must be discharged by making an incision between the ribs; the most dependent point should be chosen for the outlet of the matter; care should be taken that no air enter the orifice; the orifice should be tented and the matter drawn off from day to day, till it ceases to discharge. I have known matter to be discharged for several months, from such abscesses. The patient becomes extremely emaciated. The strength must be supported by a more nourishing diet, wine and vegetable tonics, such as Huxham's tincture; a tea spoonful may be given, three times a day, in a little water; or the following bitters may be used, instead of the tincture:

*Recipe:* Peruvian Bark, one ounce.  
Gentian Root, half an ounce.  
Orange Peel, half an ounce.  
Black Snake Root, half an ounce.

Make all fine, and add to them one quart of good Madeira wine. Shake the bottle well, once or twice a day, for three or four days. A table spoonful may be taken three times a day in water, or the following may be used:

*Recipe:* Sulphate Quinine, twenty grains.  
Sulphuric Acid, ten drops.  
Water, one ounce.

Mix, and shake till the quinine is dissolved. A tea spoonful may be taken in a wine-glassful of water three times a day. None of these tonics should be given when the patient has fever. The bowels may be kept open with the following pills:

*Recipe:* Rhubarb, twenty grains.  
Castile Soap, ten grains.

Form six pills. One or two of these may be taken every night, so as to produce one motion in the morning. Sometimes the bowels are too loose; in this case, give a Dover's powder at bed-time; from three to six grains may be given for a dose. Some gentle expectorant should be given; for this purpose, the preparations of gum ammoniac are very good:

*Recipe:* Gum Ammoniac, twenty grains.  
Acid Nitric, ten drops.



Pulverize the gum fine, and dissolve in two ounces of water; then add the acid. A tea spoonful may be given from four to six times in twenty-four hours, in water; or the following may be given:

*Recipe:* Gum Arabic, one ounce.  
Sirup of Squills, half an ounce.  
Water, half pint.

Mix, and give a table spoonful every five hours; or the following pill may be given as an expectorant:

*Recipe:* Pulv. Squills, ten grains.  
Opium, one grain.

Form ten pills. Give one, three or four times a day, as the urgency of the case may require. The patient should be allowed fresh, pure air, and a nourishing diet. As soon as the strength will admit of it, exercise on horseback, or in a carriage, should be taken. Great care should be taken to keep the skin clean and the pores open. A strengthening plaster worn upon the chest will be of service, by bracing the chest and supporting the muscles.

## DYSENTERY, OR FLUX.

DYSENTERY is a miasmatic disease, and frequently prevails epidemically in summer and fall. Extremes of heat and moisture, or extreme drought, will produce the disease; also a sudden check of perspiration, with a determination of the fluids to the bowels, will often terminate in dysentery. In dysentery, the mucous membrane of the bowels is more or less inflamed, accompanied with frequent stools, severe griping pains, tenesmus, and more or less fever. The stools are frequent and small in quantity, and but little, if any, natural fæces mixed with them. They consist mostly of mucus mixed with blood. When natural fæces do appear, they are generally a small, compact, hard substance, in little lumps or balls. Besides the causes above enumerated, dysentery may be produced by unsound food, and by noxious exhalations; hence its frequent appearance in low, marshy situations, where it is apt to be malignant. When dysentery makes its appearance where large numbers of people are collected or crowded together, it is apt to spread with great rapidity. Dysentery frequently occurs about the same time that autumnal fevers make their appearance. It then partakes of the

character of the epidemic, and even obtains the ascendancy; the other gradually slides into and partakes of the character of the epidemic. Dysentery is, under such circumstances, attended with regular chills, or a cold stage, which has given rise to the opinion advanced by some, that it is a misplaced form of intermittent or remittent fever, just as the one or the other may prevail at the time. Dysentery may be readily distinguished from diarrhœa, by the former being always attended with more or less fever, and the latter with none. In diarrhœa, there is no griping, no blood discharged in the stools, and but little straining or tenesmus. An attack of dysentery is generally preceded by a loss of appetite, costiveness, flatulence, with more or less sickness at the stomach, and occasional vomiting, or efforts to vomit. It always comes on with a chilliness, succeeded by heat of the skin, and an increased frequency of the pulse. These symptoms generally precede the griping, when evacuations shortly succeed. When inflammation begins to occupy the lower part of the intestinal tube, the stools become more frequent, but smaller in quantity, with great pain in the lower part of the bowels. The stools vary both in color and consistency; sometimes they are nothing more than frothy mucus mixed with blood, and at other times of an acrid, fetid fluid, which not unfrequently resembles the washing of fresh meat. Sometimes the evacuations are pure blood, and occasionally lumps of mucus resembling cheese, and sometimes pure matter, is discharged from the bowels. In some forms of the disease, the discharges consist almost entirely of whitish-looking mucus, constituting what is called by authors *disenterea alba*, or white dysentery. When the evacuations are of such various colors and consistency, it is seldom that any natural fæces are discharged with them; and if there is, it will be in hard balls or lumps. After passing them, the patient will experience more or less relief from pain and tenesmus. It frequently occurs, that from violent straining at stool, a portion of the intestine is forced down; this will increase the tenesmus. More or less fever always attends the symptoms above described, especially when it partakes of the putrescent character. The fever may disappear, and the dysenteric symptoms still continue, producing great prostration of strength, and if accompanied with a putrid tendency, and fetid and involuntary discharges, the disease is more apt to terminate fatally. But when the symptoms are more mild, the disease is apt to be protracted, and finally terminate in

a general perspiration. Now, the fever, nausea and griping cease. The stools become natural in color and consistence, the appetite returns, and the patient recovers. When dysentery has not been taken in time, or when it has been badly treated in the outset, it is of difficult cure. If the subject of dysentery has previously labored under scrofula or consumption, or if his constitution has been previously injured by some other disease, his situation is very dangerous. A great degree of griping and tenesmus, with frequent desire to occupy the close stool, and but little discharged; great fetor of the evacuations, and much loss of strength; high fever and a swollen abdomen; cold, clammy sweats and cold extremities; thrush in the mouth; dark or purple spots on the skin; hiccough, with a weak and irregular pulse, and belching up of a greenish or yellowish fluid; sunken eyes; tremulous hands and delirium; are extremely dangerous symptoms. Upon opening the bodies of those who die of dysentery, the internal coat of the large bowels, (the colon and rectum,) will be found inflamed, with the evident ravages of inflammation fully exhibited, such as ulceration, gangrene and contractions. Sometimes the peritoneum shows traces of inflammation.

#### TREATMENT.

In the progress of this disease, two distinct stages manifestly appear. In order, therefore, to treat it properly, proper attention must be paid to these different stages. In the first stage, if the patient is young and full of blood, with a high fever and a strong pulse, and there is pain and soreness in the stomach or bowels, on pressure, he should be bled from the arm. But if the fever is not high, and the pulse not very strong, then ten or twelve leeches should be applied over the region of the abdomen. Cups may be substituted where leeches cannot be had. Several ounces of blood should be taken. Let it be recollected that the inflammation which exists in the bowels is not produced by the disease, but is a part of the disease itself; therefore our remedies should be addressed to it as to the primary disease. After the free abstraction of blood, we may safely give an emetic:

*Recipe:* Ipecac., twenty grains.  
Tartar Emetic, three grains.

Mix, and give it in the usual way. If, after the puking is over, it should not act freely on the bowels, in three or four hours, give the following purgative:

*Recipe* : Calomel, ten grains.  
Rhubarb, ten grains.

Form four pills. Give two; wait two hours, and give the others. After the operation is over, if a tenesmus continues, and there is any straining, and frequent inclination to occupy the close stool, give :

*Recipe* : Pulv. Ipecac., six grains.  
Pulv. Opium, two grains.  
Tartar Emetic, one grain.

Mix. Form four pills. Give one every hour, till the patient is tranquillized. If a perspiration is induced, much good will result to the patient. After the effect of these pills is over, should the bloody discharges come on again with tenesmus, give the following medicine :

*Recipe* : Calomel, twenty grains.  
Ipecac., four grains.  
Opium, one grain.

Mix; and divide into four papers. Give one every two hours, till all are taken. If they should not operate in a reasonable time, give a dose of castor-oil or Rochelle salts. The salts should be given in warm tea. If, during the operation, the stomach should be sick, a tea spoonful of clove tea may be given occasionally. If great pain and soreness exist in the stomach, a blister should be applied over it; likewise over the bowels, if the soreness is great there. As long as the discharges from the bowels are mixed with blood and mucus, the calomel, ipecac. and opium, should be repeated once every twenty-four hours, and followed either with the salts, or oil, or rhubarb. If the gums become sore, the calomel should be omitted, but the ipecac. and opium continued. This disease cannot be treated successfully without opium or laudanum. In all dangerous cases, a safeguard to returning health will be found in a light salivation. During the course of the disease, the warm bath will be found serviceable, either by fomentations with cloths wrung out of hot water and applied to the abdomen, or a general warm bath. The drink should, during the whole course of the disease, be mucilaginous, such as slippery-elm tea, rice-water, flax-seed tea, barley-water, &c. The diet should be light and thin, the room well aired, the bed-clothes frequently changed, and the discharges removed quickly from the room. In convalescence, great care should be taken that the patient does not eat too much, and relapse.



## INFLAMMATION OF THE STOMACH.

INFLAMMATION of the stomach may be produced by swallowing acrid and poisonous substances, such as arsenic, corrosive sublimate, or any other powerful poison; or by food of an unsound and improper quality; large portions of strong spirits; or by hearty draughts of very cold water, when the person is overheated; or by repelled eruptions, such as small-pox, measles, or gout. Besides these causes, it may be communicated from some other contiguous organ, or by violent blows on the stomach. Inflammation of the stomach may be distinguished from any other disease of that organ, by the tension, heat, and burning pain in that organ; by the aggravation of that pain when anything is swallowed, and the immediate ejection of it. There is always a great depression of strength in this disease. It may be precisely located by the seat of the pain, and by pressure with the ends of the fingers. The stomach is generally distended with wind; there is a constant rejection of what is swallowed; the thirst is most distressing, and great anxiety and restlessness pervade the whole system; a continual tossing of the body, with watchfulness and debility; the pulse is quick, hard, and contracted. In some cases, a severe purging attends. If the disease increase in violence, the strength fails rapidly, and the patient becomes faint, the breathing short and hurried, and cold, clammy sweats break out on the face and extremities; hiccough and an intermitting weak pulse follow, and death soon closes the scene.

## TREATMENT.

This is a disease of active inflammation, let the cause be what it may. I shall not give the remedies for inflammation of the stomach when produced by arsenic, or corrosive sublimate, &c.; for I shall notice them under the head of poisoning. The remedies necessary to the cure of inflammation of the stomach, produced from other causes than potent poisons: If the disease in question be produced by improper food of any kind, — unwholesome or unsound, — the first thing to be done is to aid the vomiting by large draughts of warm water, that the stomach may be thoroughly washed out. Then take as much blood from the arm as the patient can bear. If fainting feelings should



come on, no danger need be apprehended. This should be followed by an active injection. Then give the following medicine :

*Recipe :* Calomel, twenty grains.  
Opium, one grain.

Mix, and divide into two powders. Give one, in a very small quantity of sugar, and repeat in two or three hours. The drink should be very light, plain mucilage, such as barley-water, or slippery-elm tea. If the pain and burning continue in the stomach, leeches or cups should be applied over it; and, after the blood is suffered to run till the pulse becomes weak, then apply a large blister plaster over the stomach. The calomel and opium should be continued every two or three hours, till the stomach is composed. Then they should be solicited by injections. When the inflammation has been induced by a repelled eruption, the treatment should be different. There we cannot use the lancet, but it is a desideratum to bring the eruption again to the surface. Since I commenced writing this chapter, I have had a case in point, produced by a repelled eruption of scarletina. The patient is a man, fully grown. The eruption had been out about thirty hours, when, by exposure to the cold air, it struck in, and he commenced vomiting; and the poisoning increased rapidly, — (he had taken a dose of some nostrum,) — after he thought the medicine taken was done operating. The discharges became very liquid, and he vomited everything he swallowed, fluid or solid. He became alarmed, and sent for me. I found him prostrated; his pulse hard, quick, and resisting; his feet cold, and disposed to cramp; his thirst intense; his tongue covered with a brownish crust, and disposed to be dry. He was anxious and restless; the eruption had receded from the surface, and his skin was of a light livid color. I attempted to restore the eruption, by aromatics and opium, and warm teas, with sinapisms of mustard over the stomach and on the extremities; but his stomach rejected everything that was taken, for twelve or fifteen hours, though in that time four or five grains of opium had been taken in various ways. I succeeded in producing a copious perspiration, but no abatement of pain, vomiting, or purging. In my absence, the nurse gave him some French brandy, but it only aggravated the symptoms. I then applied a large blister plaster over the stomach, and ordered ten grains of calomel, with half a grain of opium, — the dose to be repeated every two hours, till the stomach was quieted. By the

time the second dose was taken, (which he retained,) the blister began to draw, and all the unfavorable symptoms left him. In six hours, he was tranquil and cheerful, with the eruption returning on the surface, bowels calm, stomach easy and quiet, and the extremities warm. He then progressed, without any untoward symptoms. The drink in this disease should be some light mucilage, and as little as possible. The diet need be nothing more than the drink; for nothing can be digested while active inflammation exists in the stomach. Some practitioners advise the free use of cold water in inflammation of the stomach, and even go so far as to give ice. Whatever good it may have done in the hands of others, I never saw it given and the patient live. The sudden chill produced in the coats of the stomach will be attended by reaction, and all the symptoms aggravated thereby. The lips turn blue; the extremities become cold; the skin shrivels, and a fatal collapse always follows, as far as my observation goes, in the use of ice. The bad effects of ice, in such cases, are like those symptoms produced by large draughts of cold water taken when the person is over-heated. It never should be used. To sum up the whole treatment: when there has been no eruption struck in to prevent the use of the lancet, bleed from the arm; then leech, or cup, over the stomach; use injections, to keep the bowels open; give calomel and opium internally; blister the region of the stomach; let the drink be thin mucilage, a little warm; give but little at a time; this will be sufficient nourishment. If salivation ensues from the use of the calomel, let it come, rather than lose the patient. No other medicine will be retained on the stomach. Every physician knows that calomel is a counter-stimulant, and a sedative to a certain extent, and in no disease do we see the effects of it more fully manifested than in inflammation of the stomach and bowels.

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## INFLAMMATION OF THE BOWELS.

ELDERLY persons are more subject to inflammation of the bowels than youth. The causes of inflammation of the bowels are: long-continued and obstinate costiveness, loading the bowels with indurated fæces, or any acrid substance lodged there; spasmodic cholice; intussusception, or a folding of the bowels

into themselves; the application of cold to the feet, or the abdomen; a sudden check of perspiration. The disease is manifested by an acute pain in some part of the abdomen, which may spread all through that region; this is generally most acute about the navel; the pain is always aggravated by pressure; there is more or less eructation of wind, and sickness at the stomach, with a vomiting of bilious matter; there is great heat and thirst, with restlessness, a quick and hard pulse, and obstinate costiveness; the pain gradually increases; the bowels are spasmodically drawn together in knots, and are extremely painful to the touch; the urine is secreted in small quantity, and voided with pain. If the inflammation is not arrested, it soon terminates in gangrene, and then the pain subsides; or it may terminate more favorably, by resolution,—then the symptoms gradually abate. The only disease with which inflammation of the bowels can be confounded is cholic; but a little examination into the symptoms will soon satisfy you whether the disease is cholic, or inflammation. There is no fever attending cholic, while there is fever, with a quick, small, hard pulse, and much increase of pain, in inflammation of the bowels. Inflammation of the bowels is a dangerous disease; it often terminates in gangrene, in a few hours from its commencement. When this takes place, there is a sudden remission of pain; the features shrink, and the pulse becomes soft and weak; there is generally a suppression of urine; the abdomen swells, and hiccough comes on; the abdomen seems to be inflated with wind, and, when struck with the fingers, sounds hollow. But this disease may prove fatal during the inflammatory stage. A favorable termination of this disease is manifested by the abatement of pain, and the appearance of natural stools; a general perspiration over the whole system, with a firm, equal pulse, and a copious discharge of urine; or any two of these symptoms, fully manifested, indicate a favorable termination of the disease. When inflammation of the bowels terminates in ulceration, (which is not very common,) the fever abates, and the pain gradually subsides; but there are occasional rigors, or chilly sensations; there is also matter mixed with the fæces. Dissections show that inflammation may pervade the bowels to a very considerable extent; and cohesive inflammation frequently takes place between them and the contiguous parts; the blood-vessels supplying the fat of the bowels have been found much engorged with blood. Ulceration does not always make its way through the coats of the

bowels, but is generally found in the inner or mucus coat. Mortification is not a very uncommon occurrence; twistings and strictures of the bowels have also been met with. In this disease, the lining of the abdomen (the peritoneum) is frequently inflamed, and covered with a layer of coagulable lymph. The omentum, or call fat, is often inflamed.

#### TREATMENT.

In inflammation of the bowels, as in all other inflammations of vital organs, the remedies must be prompt and efficient. Depletion is imperiously demanded; bleeding from the arm should be promptly used, and the bowels should be opened by an active injection. If the pain is not relieved, leeches or cups should be applied over the painful part; then the warm bath, or fomentations of warm vinegar and water constantly applied by the use of several folds of cloth kept wet in it, and laid over the abdomen. If the pain still continues, a blister plaster should be applied all over the abdomen. As the stomach is always more or less sick, it is difficult for it to retain any medicine; calomel is the only article likely to be retained.

*Recipe:* Calomel, twenty grains.  
Extract Colocynth, ten grains.

Form four pills. Give one every hour, till all are taken. Then use injections to invite their operation. After a few operations have been procured, if the sickness of the stomach should continue, give the following:

*Recipe:* Calomel, twenty grains.  
Opium, two grains.

Form four pills. Give one every two hours, till the stomach is composed. If the stomach will retain it, give a dose of castor-oil, or the following:

*Recipe:* Manna, half an ounce.  
Rochelle Salts, half an ounce.  
Peppermint-Water, two ounces.

Dissolve the medicine in the peppermint-water, and give it at two or three drinks, half an hour apart. After procuring free evacuations from the bowels, they may be kept open by small doses of *Rochelle salts*, *magnesia* and *cream tartar*, or *castor-oil*, or *senna* and *manna*. But if the stomach continues irritable, your best medicine is *calomel*, in small and frequently repeated doses. If gangrene takes place, the patient will in all probability die. The strength in this case, however, should be supported by quinine and wine, or wine and the decoction of bark, and charcoal-

water. During the whole course of the disease, the drink should be mucilaginous and a little warm, such as rice or barley-water, slippery-elm tea, or water gruel well boiled and lightly salted. But little should be taken at a time, and not too frequently repeated. The drink will constitute the diet till the inflammation is removed. Great care should be taken that the patient, in convalescence, does not eat too much and relapse; the bowels should be carefully attended to, and kept open for some weeks, and the diet should be light. Moderate exercise in the open air may be taken, but great care should be taken not to get wet, especially the feet. Cold water has been recommended to be dashed on the abdomen in inflammation of the bowels. To say the least of it, I think it a doubtful remedy.

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## INFLAMMATION OF THE LIVER.

INFLAMMATION of the liver, as met with by physicians in their practice, may be divided into acute and chronic. In the acute form, all the symptoms of genuine inflammation are manifested. The chronic form of this disease exhibits symptoms of less violence as to fever, but presents an enlargement and hardness of the liver, with an obtuse pain in the right side, under the edge of the ribs. The causes are those which produce other inflammations, such as applications of cold to the body or feet, external injuries from falls, bruises, blows, &c., by violent exercises, intense summer heat, by long-continued intermittent or remittent fevers, by an intemperate use of spirituous liquors, and by various solid concretions in the liver. In warm climates, the liver is more apt to be affected by inflammation than any other part of the body, probably because there is more bile secreted in hot than in cold climates. The cool, damp air acting upon the surface after an intense hot day, in tropical climates, causes the blood to recede from it, and accumulate in the liver, thereby producing engorgement, and, subsequently, inflammation. The bile being acrid in hot climates, an irritation is more readily excited by it, and inflammation ensues. These are probably the reasons why inflammation of the liver is more frequent in hot than in cold climates. The liver is the seat of disease in hot climates in about the same proportion that the lungs are in cold climates. The acute form of inflammation of the liver comes on with a sense of chilliness, succeeded by a pain in the right side, under the



ribs. The pain is sometimes sharp, and extends up to the collar-bone and shoulder, and pressure on the part increases it. There is a difficulty of lying on the left side; oppression in breathing, and more or less cough; the patient can always lie best on the diseased side; there is not unfrequently nausea and vomiting of phlegm, mixed with bile; the bowels are generally costive, and the stools light or clay-colored. The urine is small in quantity, and highly colored. There is great thirst and loss of appetite; the pulse is strong, hard and frequent, and from 90 to 100 strokes in a minute. It sometimes intermits, beats a few strokes, then loses one. The skin is hot and dry, and the tongue covered with a white or yellow coat; after the disease has continued for some days, the eyes and skin may become tinged with a yellow hue. This is more particularly the case when the gall ducts are obstructed by biliary calculi. It is said by some writers, when great difficulty of breathing and cough attend, that the inflammation is on the upper surface of the liver, but when situated on the under surface, there is more sickness of the stomach and vomiting; the pain is not so violent, but there is more yellowness of the skin and eyes. I think that these signs are not always true. It is, however, quite probable that when the inflammation is situated on the under surface of the liver, it is more apt to become chronic than when situated on the upper surface of that organ.

The chronic form of this disease is usually accompanied with a sallow, unhealthy complexion, loss of appetite and flesh, indigestion, flatulence, pains in the stomach and yellow tinge in the skin and eyes; the stools are light and clay-colored; the urine is highly colored, and deposits sediment and ropy mucus. There is always an obtuse pain in the liver, more or less pain in the shoulder, and sometimes a dull pain across the arm, between the wrist and elbow. The patient is frequently troubled with asthmatic symptoms, and is more or less dyspeptic. When there is much hardness in the liver, the pulse is apt to intermit. Some of these symptoms are occasionally so slight that they are not noticed unless they are particularly inquired for. After death, large abscesses have been found in the liver, which were the result of previous inflammation. There is no discharge in chronic inflammation of the liver, by the cough, unless the lungs become affected by sympathy, or the inflammation has extended to the lungs and caused suppuration. Inflammation of the liver may be distinguished from spasm in the gall ducts. In the

spasm of the gall ducts, the patient always wishes to bend the body forward on the knees; but, in inflammation of the liver, he wishes to keep as erect as possible. This disease is often carried off by hemorrhage from the nose or bleeding piles, a diarrhœa, sweating, or large evacuations of urine, which deposits a copious sediment. It has been known to yield to the action of erysipelas in external parts of the body, or the extremities. The most favorable signs of recovery are a gradual abatement of the febrile symptoms, an improvement in the complexion and an improvement in the appetite, and an accession of strength. On the other hand, intensity of pain and fever, obstinate costiveness, severe rigors of cold, succeeded by flushings of heat and fever, denote that suppuration has taken place. Continued hiccough, cold extremities and sinking pulse, denote gangrene. Before suppuration takes place, adhesions generally take place between the surface of the liver and some neighboring parts. The matter is generally discharged by some of the outlets with which this part is connected, either by coughing, vomiting or by stool, or by the abscess breaking outwardly, or by its being opened by art. In some cases, the pus is discharged into the cavity of the abdomen, and floats among the bowels either till it kills the patient or is taken up by the absorbents and thrown off by the bowels. On dissection, the liver is often found enlarged and hard to the touch. The color is more of a deep purple than natural, and there are more or less traces of inflammation to be seen on its membranes. Gall stones are now and then met with, obstructing the gall ducts, or partially filling the gall bladder. In a few instances, the liver of those dying in this state has been found putrid, and presenting somewhat the appearance of honey-comb. What constitutes the greatest difficulty, sometimes, in successfully treating inflammation of the liver, especially in hot climates, is, that in many cases the primary symptoms which indicate inflammation are so obscure that suppuration takes place before the disease is truly apprehended. The pain in the side may not be constant or acute; the patient may not take much notice of it; he seldom mentions it unless he is particularly questioned about it, and then he will reply that he has occasionally felt some slight pains in the side, but that they have not given him much uneasiness. He may complain of occasional pains in the pit of the stomach. The secondary symptoms are then our only true explicators of the case. These are a diarrhœa, a dry, hacking cough, and pain in the top of the

shoulder. We shall generally be able to find some fulness and tenderness, by pressure on the liver with the fingers, and the eyes and skin will present some yellowness. By these symptoms we may ascertain the true nature of the disease.

#### TREATMENT.

In the early stage of acute inflammation of the liver, the patient should be freely bled from the arm, proportioning the quantity taken, to the age, strength and habits of the patient, the violence of fever, and the acuteness of the pain. If the fever and pain continue, the bleeding may be repeated in twelve hours, and if the symptoms demand it, again the next day. By neglecting to bleed freely, there is great danger, especially in hot climates, of suppuration taking place. After the first free bleeding, the bowels should be freely acted upon by the following medicine:

*Recipe:* Calomel, twenty grains.  
Jalap, twenty grains.

Mix, and give it in sirup. Work it off with gruel, lightly seasoned. The operation will be free, and rather liquid than otherwise, which, in this case, will be right. If the fever continues the next day, give the following:

*Recipe:* Senna Tea, half pint.  
Rochelle Salts, half ounce.  
Tartar Emetic, one grain.

Dissolve the salts and tartar in the tea. Give two table spoonfuls every hour, till they operate freely. If the patient should puke a little, it will do him no harm. After the operation is over, if the pain continues, apply a large blister plaster over the region of the liver, and give the following cooling powders:

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.

Mix, and divide into six powders. Give one every hour, in warm balm, hyssop or sage tea. The patient should drink freely of the tea, to aid the perspiration. If the fever continues, give the following:

*Recipe:* Calomel, twenty grains.

Divide into five powders. Give one every three hours, in sirup, till all are taken. Follow these, in two or three hours, with a dose of *castor-oil*. Nothing cold or salt should be given till the calomel is worked off. If any pain or soreness remains, the following pill may be given:

*Recipe* : Blue Mass, sixty grains.  
Aloes Socatt, twenty grains.  
Rhubarb, twenty grains.

Mix well, and form twenty-four pills. Give four of these for a dose. If they should not operate in six hours, give two more. Continue these till the inflammation is overcome. An eruption on the lips, indicates favorably. During the whole course of treatment, the diet should be light, and the drink mild and diluent, such as rice-water, barley-water, slippery-elm, flax-seed, balm, hyssop or sage tea, &c. Bathing the feet and legs occasionally in warm water, will be found serviceable. When eruptions take place on the lips, or erysipelas breaks out on the extremities, the cure may be completed by the use of quinine or salicine, as follows :

*Recipe* : Sulphate Quinine, twenty grains.  
Elixir Vitriol, thirty drops.  
Pure Water, one ounce.

Mix. Give a tea spoonful three or four times a day in water ; or if quinine disagrees with the patient, give :

*Recipe* : Salicine, forty grains.  
Acid Sulphuric, twenty drops.  
Pure Water, one ounce.

Mix, and give as above directed. The diet may now be improved, and convalescence will take place. But this disease does not always terminate so favorably, for the proper remedies are not always used in time, and suppuration takes place, which may be known by the patient experiencing rigors or chills. The completion of the process may be promoted by very gentle purgatives, and the use of *quinine* or *salicine*, as above prescribed. The abscess should be invited outward, by the application of emollient poultices over the region of the liver. The part should always be fomented with warm water, or strong hop tea, before the poultice is applied. When the tumor points outwardly, and becomes soft, or fluctuation can be felt under the finger, it should be opened in the most dependent part. Great care should be taken that all the matter is discharged. In 1816, the author was called to a little girl, nine years old. She had received a bruise in the liver by a fall, and an abscess had formed. The tumor was prominent, and the fluctuation of the matter evident. He opened the abscess by dividing the skin and muscles immediately under the point of the short ribs, till the surface of the liver was brought into view. Then an incision was made into the liver with an abscess lancet, and the matter flowed out freely



to the amount of two large saucers full. The edge of the saucer was held firmly against the side, to prevent any matter escaping into the cavity of the abdomen. The wound was then tented into the liver and a compress applied over the whole. The next day, on removing the tent, several ounces more of matter were drawn off; thus the quantity decreased every day, for several days, till the pus ceased to be discharged. The orifice was then suffered to heal. The little patient's strength was supported by wine and the decoction of bark, (we had no quinine in those days,) and a generous diet. The bowels were kept open with very gentle medicines. She recovered, grew up, married and raised a large family. In the same summer, I was called to see a little boy, whose parents lived some fifteen or eighteen miles from me. He had, some weeks before, fallen from a height of ten or twelve feet and struck his side on a rail, and his liver swelled and finally suppurated. When I saw him, his liver, by inflammation and suppuration, occupied nearly the whole of the left, as well as the right side. The evidences of suppuration were apparent. The navel was very much protruded, and fluctuation could be distinctly felt in it. After a close examination of the whole case, I came to the conclusion that nearly the whole liver was a mass of matter, and that the cord, which was once the navel string, had been opened by the process of suppuration, and that it might be a suitable outlet for the matter. I, therefore, by a free cut with a lancet, opened the end of the navel, and to my astonishment not less than three pints of matter were discharged by the incision, in a short time. I stopped the flow occasionally, to let the patient revive, for he became faint. The orifice was then tented. The tent was removed every day, and the matter allowed to discharge. His strength was supported with wine and bark, the mineral acids, and a generous diet. The bowels were kept open with blue mass and rhubarb, and other mild purgatives. This case discharged pus for nine months, and the patient finally recovered, and grew up to manhood. But there are other ways by which the matter is discharged from the liver. I will relate another case. I once saw a young lady, eighteen years of age, who had labored under a long protracted intermittent fever, in Virginia, some seven or eight years before, since which time, her parents informed me, she had lost all color in her face, and had had a lump in her right side, under the ribs. She had been a long time afflicted with dyspepsia and indigestion, with clay-colored stools. When



I saw her, she had no color in her face; she was very much emaciated; she had a dry, hard cough; she had never menstruated; her feet frequently swelled; she had night sweats, and no appetite. After examining the case closely, I informed her parents that I believed there was an abscess in her liver. They thought not, but said she had consumption. My opinion, however, was unchanged, and I commenced the cure with calomel and blue mass, alternately, mixed with rhubarb, which I continued for several days. At one of my visits, I believed the swelling had so completely obstructed the gall-duct, that the mercurials could not bring bile. I, therefore, resolved to give an emetic, with a view to break the abscess; for, at this time, the patient was extremely prostrated, and gave every indication of sinking in a short time, unless she could obtain speedy relief. I apprized both herself and parents, that if the abscess broke into the cavity of the abdomen, she would probably die in a short time; but if it was discharged into the stomach, she might live; and if it was not discharged, she could not live. With this explanation of the case, they consented that she might take the emetic. I accordingly gave her an emetic of ipecac., and sat by her. At the second or third effort to vomit, the whole discharge was a whitish fluid pus, extremely fetid. She discharged, as nearly as I could judge, about one quart, under which operation she was very near sinking. It, however, turned down upon the bowels, and a large quantity was discharged by stool. Wine and laudanum sustained her then; and afterwards, wine, bark, and the mineral acids, and an improved diet. Gentle aperients were used to keep the bowels open. Her father removed to the Green river country some six or eight months afterwards, with his daughter's health greatly improved. She had menstruated two or three times, regularly. Two or three years afterwards, I was in her father's neighborhood, and called to see the family. A more healthy, rosy young lady, I had not seen in her neighborhood, than was the subject of this narrative. I treated this case in 1818. In the winter of 1846, I was called to see a lady, in consequence of a slight discharge of matter from the umbilicus, which had taken place the day before. Her pulse was soft and compressible; the tongue white; the bowels constipated, and her voice feeble; the skin cool, and rather clammy, and she had no appetite. The history of the case, as she gave it, was this: About three weeks before, she had spent the day at a neighbor's; she had been in the habit of wearing loose wrappers for a year

or more, but on that day she put on a tight-bodied dress, and more under-clothes than usual. She felt that her dress pressed so hard that she was very uncomfortable all day, but she bore it till she returned home at night, by which time there was great soreness all around her waist, at the edge of her short ribs. The next morning the soreness had increased, accompanied with fever. She, however, neglected to use any remedies, and the fever continued, and the soreness, which had amounted to a pain, also continued for eight or ten days, when she began to feel frequent cold rigors, and some sickness at the stomach, with almost an entire loss of appetite. Thus these symptoms continued for several days, when she took some aperient medicine which she had in the house. But the navel began to inflame and became very sore, and in twenty-four hours a small quantity of pus made its appearance there. This caused her to send for me. I was satisfied, on a close examination of the case, that suppuration had taken place to some extent in the liver. I so informed her, and gave her a dose of the following medicine :

*Recipe:* Blue Mass, ten grains.  
Rhubarb, ten grains.

Formed into five pills; given for a dose. Strict rest was enjoined. Next day, the symptoms about the same; prescribed a repetition of the pills, as the dose taken yesterday had brought but little bile. Third day the pills had operated better than the first dose; but little bile, however, was discoverable in the evacuations. Her pulse was weaker and her skin cool and soft, tongue white. I then ordered,

*Recipe:* Huxham's Tincture, two ounces.

A tea spoonful to be taken, three or four times a day, in a little good wine and water. The discharge from the navel not abated, a soreness generally diffused over the abdomen, with some swelling under the ribs in the right side; ordered an injection of molasses and water, and the drops and wine to be taken as above directed. On the fourth morning I found her very much debilitated; her voice weak, her features shrunken, her eyes hollow, her pulse weaker and more compressible than the day before, and she informed me that she had spent a sleepless night, having suffered much pain till four o'clock in the morning, when it left her side, and she dropped to sleep in a moment. She slept an hour or two, and awoke in a cool perspiration; felt very feeble; the discharge had ceased from the navel, and the swelling had sub-

sided in that part as well as the side. I knew the abscess had discharged internally, of which fact I informed her husband privately, (as she was nervous and fearful.) I ordered the tincture and wine to be given more frequently, and chicken broth occasionally, and the following pills to be taken with a view to the absorption of the matter.

*Recipe:* Blue Mass, forty grains.  
Rhubarb, twenty grains.  
Castile Soap, twenty grains.

Form twenty pills; two to be taken every four hours, till they operated. The first operation brought some matter, the second much more. The pills were continued every day, so as to produce two or three evacuations in twenty-four hours. The tincture and wine were continued; light broths, gruel, tea and soft toast were ordered for diet. The matter was discharged more or less every day for a week. Her appetite and strength improved; the discharges ceased from the navel, and she gradually improved, till her health was perfectly restored. Towards the close of her taking medicine, with a view of giving more permanent strength, I ordered the citrated aromatic wine of iron, a tea spoonful three times a day, and the bowels to be kept open with the above pills. It has now been six months since I attended this case, and my patient is enjoying perfect health. I have related these four cases, in order to show the different manifestations and terminations of abscess of the liver. I have witnessed various other cases, but the general symptoms of all of them may be found in some one or more of the cases above related. But there is another form of inflammation of the liver, — that is, chronic inflammation, strictly so called, — which is necessary to be described and treated. This is also the consequence of inflammation in peculiar constitutions. This inflammation terminates in an indurated and hardened condition of the liver. The organ swells, feels hard and sore; the stools are clay-colored; the urine is highly colored, and deposits a reddish or brown sediment. The tongue is always coated towards the root in the morning; the stomach is dyspeptic; the eyes and skin have a yellow tinge; the skin sometimes becomes dark or brown, and is covered with livid spots; the appetite is poor, and the patient feeble. This is frequently the consequence of a scrofulous habit.

*Recipe:* Iodine, twenty grains  
Alcohol, one ounce.

Dissolve the iodine in the spirit. Give from twenty to forty drops, three times a day, in sweetened water, according to the strength of the patient. At the same time, the bowels should be kept open with the following pill :

*Recipe* : Blue Mass, sixty grains.  
Rhubarb, sixty grains.

Form twenty-four pills. Give two or three of these at bed-time; if they should not operate by morning, give two more, and repeat them every night. One or two operations should be procured every day. The mouth should not be allowed to become sore. If any signs of salivation appear, the blue mass must be discontinued, and the following medicine given :

*Recipe* : Nitric Acid, half an ounce.  
Muriatic Acid, half an ounce.

Give ten drops, three times a day, in a glass of sweetened water. At the same time, a tea spoonful of the acid may be poured into half a pint of water, and the side bathed with it freely; it should be rubbed in till the skin tingles freely. This should be repeated three times a day. The diet should be light, and consist of those articles that sit easiest on the stomach. A foot-bath of the acid and water has done great good in my hands in this form of the chronic disease of the liver. The acid above named, called the nitro-muriatic acid, has been taken for months, before the liver has been restored. Repeated blisters, drawn over the region of the liver, have done much good in this form of the disease. The vegetable tonics will be found serviceable. The following may be given :

*Recipe* : Gentian Root, half ounce.  
Columbo Root, half ounce.  
Orange Peel, half ounce.  
Quassia, half ounce.

Cut all fine, and add to them a quart of old whiskey. Shake the bottle every day for six days; then take a table spoonful in water three times a day. The bowels may be kept open with *Rochelle salts* or *castor-oil*, *rhubarb*, &c. Exercise, when the patient can bear it, in a carriage or on an easy travelling horse, will be serviceable. There is another form of chronic disease of the liver very much resembling the former, but it is scirrhus. This disease is frequently brought on by a protracted habit of intoxication. The liver becomes indurated, scirrhus, and destroyed in its functions. If mercury is occasionally serviceable in the former species, it is poisonous here. The remedies



are not many in scirrhus liver. They consist in the proper use of the taraxacum, or dandelion, either in extract, or the fresh, expressed juice. If the extract is used, twenty grains may be taken three times a day. If the fresh expressed juice be used, from one to two ounces may be taken twice or thrice a day. The pain is to be allayed by opium and cicuta, in the ordinary, or in increased doses :

*Recipe:* Opium, five grains.  
Castile Soap, five grains.

Form ten pills. One may be taken three times a day. The bowels should be kept open with *salts*, or *castor-oil*. The diet should be such as the stomach will bear comfortably. This form of diseased liver is almost sure to terminate in dropsy, and sooner or later, to prove fatal. In the event of convalescence, great care should be taken to avoid a relapse into former habits. The bowels should be kept open, and the diet be well regulated. Exposure of all kinds should be carefully avoided. In treating of this form of dropsy, I shall have occasion to say something more on this form of diseased liver.

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## INFLAMMATION OF THE SPLEEN.

INFLAMMATION of the spleen comes on, like inflammation of other internal organs, with rigors or chills, succeeded by heat, thirst, and other febrile symptoms; soon after which, an acute pain is felt in the left side, immediately under the short ribs; the pain is increased by pressing on the part. In many respects it resembles inflammation of the liver. Inflammation of the spleen must be carefully distinguished from a pain in the left side which is produced by an active exertion, such as running, jumping, wrestling, or a sudden gust of passion. This answers to the system the same purpose that a flood-gate does to a water-mill. When the large blood-vessels and the heart are likely to be engorged with blood from any violent exertion, to save the rupture of some important vessel, the spleen, which is a gland, receives the blood, by the expansion of its vessels, so as to hold a large quantity of that fluid. By this distension of its vessels with blood, a pain is often produced, which is very acute for a short time; but, after a few minutes' composure, the blood gradually returns into the general circulation, and the pain subsides. This pain, therefore, is not an indication of inflammation in the



spleen, for it is not attended with fever. Like the liver, the spleen is often the seat of chronic inflammation. It then becomes indurated and enlarged. The causes of inflammation of the spleen are those, generally, that produce inflammation in other organs; but an enlargement of the spleen is frequently produced by long-protracted intermittents, and then it assumes the name of ague-cake. No doubt but the cause of ague-cake is, the frequent and excessive engorgement of the spleen with blood during the protracted shakes in ague and fever. Inflammation of the spleen may terminate, like inflammation in any other large gland, in resolution, suppuration, or scirrhus. Sometimes the disease is carried off by the discharge of a dark-colored matter, like coffee grounds; sometimes by diarrhœa, and sometimes by bleeding piles, (hemorrhoids.) When it terminates in suppuration, and the abscess bursts internally, and the contents are discharged into the cavity of the abdomen, it may prove fatal, sooner or later. A simple enlargement of the spleen may last for many years, and the patient experience but little inconvenience from it, more than being short of breath when taking exercise.

#### TREATMENT.

In the early stage of inflammation of the spleen, the pulse will be found to be quick and hard, and from 90 to 100 strokes in a minute; the tongue will be covered with a white coat; the skin hot and dry, and the thirst more or less increased. When these symptoms present themselves, the patient should be freely bled from the arm, and the following medicine given:

*Recipe:* Epsom Salts, one ounce.  
Tartar Emetic, two grains.

Mix, and dissolve in a glass of warm water, half of which should be taken; and if no vomiting is produced in half an hour, the balance should be taken. Two or three motions should be produced upwards, and then the action turned upon the bowels; three or four alvine evacuations are desirable. If the fever and pain continue, another bleeding should be used, after which a blister plaster should be applied over the painful part, and the following medicine given:

*Recipe:* Blue Mass, twenty grains.  
Rhubarb, fifteen grains

Form six pills. Give three. Wait three hours, and give the other three. Work them off with gruel, or toast water. If the pain, soreness, and fever, are not entirely removed by these remedies, a dose of senna tea and salts may be given :

*Recipe :* Strong Senna tea, half pint.  
Epsom Salts, one ounce.

Dissolve the salts in the tea, sweeten it, and let it be taken at three drinks, half an hour apart. This and the above pills may be alternated with each other every other day, till the patient is cured. The diet should be light, and the drink cool, but not icy. But it frequently occurs that the spleen becomes enlarged, and perhaps scirrhus, before any medical aid is called. The only prospect then to obtain a cure is, to place the patient under an alterative course of mercury and acids. If mercury be used, the following will be found as convenient as any prescription :

*Recipe :* Blue Mass, one hundred grains.  
Rhubarb, twenty grains.

Form twenty pills. Take one three times a day, till the gums begin to get sore; then take two a day, for a week; then one a day, for another week. If necessary, keep the bowels open with castor-oil. If it is determined to use the acids, the following formula should be selected :

*Recipe :* Nitric Acid, half an ounce.  
Muriatic Acid, half an ounce.

Mix. One tea spoonful of this acid may be added to half a pint of water. The side should be bathed with it three times a day, till the hardness is removed, and fifteen drops of it may be taken, in water, three times a day; it should be sucked through a quill. If it should be necessary to take medicine to act on the bowels, the above pills will be proper. The disease will, likely, not be removed till the patient has spit for a month. Then use the following tonic :

*Recipe :* Sulphate Quinine, twenty grains.  
Sulphuric Acid, twenty drops.  
Pure water, three ounces.

Mix. Give a tea spoonful three times a day, in water. Or the following bitters may be taken :

*Recipe :* Gentian Root, half an ounce.  
Orange Peel, half an ounce.  
Columbo Root, half an ounce.  
Rust of Iron, one ounce.

Make all fine. Add to them a pint of wine and a pint of water, or good spirits in place of the wine. The bottle should

be shaken every day, for a few days. A table spoonful may be taken, in water, three times a day. The diet now should be generous. The bowels may be kept open, if necessary, by oil, or the following pill:

*Recipe:* Scammonia,  
Aloes,  
Rhubarb,  
Castile Soap, of each twenty grains.

Form twenty pills. From four to six of these, at bed-time, will operate once or twice the next morning. Exercise on horseback, or in a carriage, may be taken, in good weather. All exposure should be avoided.

## INFLAMMATION OF THE KIDNEYS.

INFLAMMATION of the kidneys may be produced by any of the causes that would occasion inflammation to take place in any other internal organ, such as, a sudden check of perspiration; suddenly becoming cool after being over-heated; wet feet; falls, bruises, or blows on the part, &c. It may be distinguished from cholic, — a disease to which it is closely allied, in some of its symptoms, — by the pain being seated near the backbone, and just below the ribs. The urine is a deep red, nearly like blood; there is frequent inclination to pass it, when but little is voided at a time; the pain is not much increased by the motion of the body. It may be distinguished from gravel, or calculus in the kidney, by fever accompanying or immediately following the attack of pain. The fever continues without any very visible intermission; whereas, in calculus, the fever does not come on for a considerable time after the pain is first felt. When calculus is lodged in the kidney, there will be a numbness in the thigh, and (if a man) a contraction in the testicle on the side affected, and a constant nausea, and frequent vomiting. Inflammation of the kidney may be distinguished from simple lumbago, or pain in the muscles of the back, by the seat of the pain, detected by pressure on the part; by the difficulty in making water; and by its being frequently attended with vomiting. The pain also extends along the ureter. In some habits, (as in those subject to gout,) irritation is frequently felt in the kidneys by acid matter being thrown into them. This very much resembles inflammation of the kidneys. But inflammation in the kidneys is attended with a sharp pain in the side of the back, just below

the ribs, on the side affected, extending down towards the bladder, in the course of the ureters; there is a frequent desire to make water, with much difficulty in passing it; the bowels are costive; the skin dry, and hot; the patient cannot walk, or sit upright, without great pain; he lies with the most ease on the affected side, and when he lies down he bends his body a little forward; he has much nausea, and frequent vomiting. In forming our opinion as to the result of the case, we are to judge principally from the age and strength of the patient; the severity of the symptoms; the quantity and quality of the urine voided. When the disease has been protracted to the seventh or eighth day, and the pain becomes less severe, if he feels chilly or shivering sensations attend him, there is great reason to apprehend that suppuration has taken place in the kidney. But remission of pain, fever, and tenderness, followed by a copious discharge of highly-colored urine, a general perspiration, or a flow of blood from the hemorrhoidal vessels, are favorable symptoms. Dissections have not only shown the usual effect of inflammation in the kidneys, but likewise abscesses have been frequently found in them, which have destroyed the whole substance of the kidney. They have occasionally been found in a scirrhus state.

#### TREATMENT.

In the inflammatory stage of this disease the patient should be bled freely, at least once or twice. The quantity taken should be proportioned to the age and strength of the patient, and the severity of the pain. After general bleeding from the arm, if the pulse becomes weak, and the pain and swelling continue, six or eight leeches should be applied over the part, and blood freely extracted. After the leeching, emollient applications may be made by squeezing flannels out of a strong decoction of poppy-heads, or hops, and kept constantly applied to the parts. When these cannot be had, use a decoction of bitter herbs, or even warm water. An injection of some mucilaginous tea, as flax-seed, or slippery-elm, may be frequently thrown up, to act as a fomentation to the parts internally. The patient, at the same time, must drink freely of mucilaginous drinks, such as flax-seed, or quince-seed tea, slippery-elm tea, rice, or barley-water, &c. Nitre should never be given in inflammation of the kidneys, as it will aggravate the disease

The bowels are to be kept open with gentle purgatives; but, in order to cause the liver to act freely, in the first instance give:

*Recipe:* Calomel, ten grains.  
Jalap, ten grains.  
Gamboge, two grains.

Mix, and give in pills or sirup. Work this off with gruel. Take nothing cold till the operation is over. After this you may keep the bowels open with senna tea, salts or castor-oil, or:

*Recipe:* Jalap, twenty grains.  
Cream Tartar, one hundred grains.

Mix, and divide into three papers. Give one in sweetened water every three or four hours, till they operate freely; and occasionally give the following purgative:

*Recipe:* Castor Oil, one ounce.  
Tea of Fennel Seed, two ounces.

Mix for a dose. At the same time, if the patient has fever, you may give the following cooling diaphoretic:

*Recipe:* Spirits Mendereri, two ounces.  
Antimonial Wine, two drachms.

Mix. Give a tea spoonful every hour, in some of the above teas. The patient should be bathed in warm water, once or twice a day, till the violence of the pain is subdued. Blisters should never be applied in inflammation of the kidneys, nor should any of the heating balsams nor diuretics be given. A decoction of the dried leaves of the peach-tree will be found serviceable, or a tea made of peach-kernels. A pint a day of either may be taken. When matter has been discharged by urine, showing that suppuration has taken place in the kidney, then some more stimulating diuretics may be given, such as:

*Recipe:* Balsam Copaiba, half an ounce.  
Harlaem Oil, half an ounce.

Mix them well together, and give twenty drops three times a day, in some mucilaginous drink. When this is proper, the preparations of iron will be found proper, such as, the citrated aromatic wine of iron. A tea spoonful may be taken, in sweetened water, three times a day; or the *citrate of iron*; one drachm dissolved in two ounces of warm water. This may be taken as above. The *uva ursi* will be here admissible. A drachm may be taken, in substance, three times a day. The diet, from the beginning, should be light, thin, and nutritious, such as, gruel, barley, light soups, tea, calf's-foot jelly. The patient should take frequent drinks of such articles, though he



may throw them up again. They will aid in relieving the inflammation. Those who are liable to affections of the kidneys, should avoid getting wet in the feet, or exposing themselves to cold in any way, especially after being over-heated; they should carefully avoid all kind of spirits, but live temperately in all things.

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## INFLAMMATION OF THE BLADDER.

INFLAMMATION of the bladder is known by pain over the pubes, in the region of the bladder; a frequent desire to make water, and a difficulty in voiding it,—and sometimes there is a total suppression of urine; a frequent inclination to go to stool, and fever.

Inflammation of the bladder is rarely a primary disease, but is generally the consequence of inflammation in some part contiguous to it. It may be brought on, however, by a suppression of urine, and distension of the bladder, or by stone in the bladder.

The treatment prescribed in inflammation of the kidneys will be proper here, only we should not give liquids in great quantities. The water should be frequently drawn off with a catheter. The warm bath, frequent injections, and cooling purgatives, are proper remedies to be used. If suppuration take place, matter will be discharged in the urine, giving it the appearance of whey mixed with it; and, occasionally, blood may be discharged. After the water is drawn off, some mild mucilage should be injected into the bladder, such as flax-seed, or slippery-elm tea, made in rain-water. Small doses of opium or laudanum should be given, to allay irritation, and procure rest. When the disease has been of long standing, *cicuta* or *hyoscyamus* should be given, in small doses, from half a grain to a grain at a time, and repeated at intervals of several hours. The diet should be light, and the feet kept warm.

## GOUT.

THE general definition of gout may be given as follows: Pain, inflammation and swelling about the smaller joints, returning after intervals; often produced by, or alternating with, usual affections of the stomach, or other internal organs. The swellings never suppurate. The resemblance between the gout and rheumatism is so close, that the one is often mistaken for the other, and they have been regarded by some writers as convertible the one into the other. Yet, while the gout fixes upon the small joints, rheumatism attacks the large ones. Both are, in the opinion of some writers, hereditary. Gout, in one of its aspects, is far more frequently connected with a dyspeptic state of the stomach than rheumatism. The attacks of gout are more sudden than those of rheumatism; its nightly exacerbations less distinct, but the intervals of attack further apart. Gout is a much more complicated disease than rheumatism. Perhaps there is no disease to which the human system is liable, that has led to such a variety of opinions, both in theory and practice. But as it is not our business in this work to theorize, but to describe disease and give the treatment, we shall avoid it here. We will, however, just say that the diversity of theories on gout has led physicians, both of ancient and modern times, to differ widely in their practice. The old humoral pathology governed the ancients; and, strange to tell, notwithstanding the moderns have discarded the humoral pathology in almost all diseases, yet in gout many of them practise as though that old theory was true. The following questions have arisen in the minds of the faculty on the subject of gout: Is the gout a local or constitutional disease? Is it a spasm or a poison? Is its course beneficial or mischievous? Should its inflammation be encouraged or counteracted? Is it to be concentrated or repelled with cold or with heat; with a full diet, or with a spare diet? No set of questions can be more repugnant to each other than these are; and yet, there is not one but we may obtain a negative or an affirmative to, by applying to different authors for this purpose. We shall not enter into the labyrinth of disputation on this subject, but proceed, in as few words as possible, to give as clear a description of it as possible; and we profess to know something about it, from experience. In the first place, it is admitted by nearly all who have written on it, that gout is a disease of the system; that is, it depends upon a peculiar state of the constitu-

tion; and that this is, in some instances, hereditary, and in others acquired. It is acknowledged by all, that it may be transferred from the parent to the child; but cases do occur in which such transfer cannot be traced. In such cases, it is acquired. The gouty diathesis is supposed to be produced by habits of indolence, luxury and indulgence, particularly in the pleasures of the table, from which habit the gouty diathesis is supposed to originate. There are others, however, though observing a life of great regularity and abstemiousness, who have been attacked by its paroxysms. Such persons are almost always capable of tracing it to a hereditary diathesis. When once established in the system, it is propagated from generation to generation. Whatever the manner of the life of the individual may be, unless the whole principle of it is removed from the system, and care be taken afterwards that it be not rekindled again, by the causes that might produce it in any one, it may be revived. A gouty disposition transferred from parent to child, may lie dormant in the child for many years, till some exciting cause is applied, which is calculated to develop it. It is declared, by some eminent physicians, that the gouty diathesis or disposition may pass over one or two generations, and then be developed in the grandchild or great-grandchild. Gout affects different persons very differently, according to their peculiarity of habit and constitution. When the general health is sound, it fixes itself on one or more of the extremities, in the form of a particular, but very acute inflammation, that runs through a regular paroxysm, and gradually subsides; and when the health is infirm, and the general system debilitated, exciting great derangement in some internal organ or set of organs, particularly that of digestion, or shifting from one form to another, thus proving itself, under any form, to be the same disease; and, finally, laying the foundation for the three following varieties: Regular fit of gout; disguised, lurking gout; and retrograde, recedent, misplaced gout. The regular gout has pain, swelling and inflammation of the affected joint, as in the toe, considerable and acute, continuing for several days, often with remissions, and exacerbations; then gradually subsiding, it leaves the constitution in its usual, and sometimes in an improved state of health. The second, or disguised, lurking, debilitated gout, is disguised in the constitution, producing derangement of the digestive and other organs, with slight and fugitive affections of the joints. The third, is retrograde, recedent, misplaced gout. This form fixes itself on some

internal organ, instead of the joints, or being suddenly transferred from the joints after having been fixed there, produces in the internal organs affected, great debility or inflammation, according to the state and condition of the constitution. The predisposing causes of a gouty diathesis, when first formed in an individual, are too great a fulness of the system, with a loaded condition of the blood-vessels; hence, in its origin, as well as the symptoms it evinces under a regular paroxysm, gout makes a near approach to various other inflammations of which we have already treated, and is more disposed to show itself where it has been transmitted hereditarily in men of robust and large bodies, of large heads, of full and corpulent, and especially gluttonous habits, covered with a thicker cuticle on the skin than is usual. Castration is said to act as a general preventive, but on what ground I know not. Such is a brief history of the origin, hereditary transmission and effects of the gouty diathesis, which must be distinguished from the paroxysm to which it gives rise, and which constitutes the only manifest indications of its existence. The paroxysms of gout are excited by certain occasional causes, some of which are obvious, and some doubtful or altogether unknown; but without the coöperation of these, the gouty diathesis may remain quiescent in the body for years, or perhaps through the whole term of life; hence, individuals whose ancestors have been notorious for the gout, have passed the whole of their days without betraying any marks of the disease. Nevertheless, some of their children may give evidences of its taint, even in their boyhood. The occasional causes of gout are very numerous; for where there is a strong predisposition in the system, anything that is capable of producing a disturbance there, and throwing it off its proper balance, will become the cause of an attack; hence, paroxysms in individuals are often produced by intoxication, or excess in eating; violent emotions of the mind, particularly the depressing passions, as grief and fear; or sudden exposure to cold, when the skin is moist by perspiration; or wet applied to the feet; great exertion of body; long and severe study; late hours, with fatigue; a sudden change from a spare to a fuller, or from a full to a very spare diet; excessive evacuations, of any kind; or the suppression of a periodical flux, as bleeding piles, or the cessation of the catamenia, or the drying up of an issue that has long been discharging. The more violent the attack, and the longer it continues, the more confirmed the disease will be in the constitution, and



the oftener the attacks will be renewed ; on which account, it will be of great importance to relieve and abridge the attacks as quick as possible, especially when they are not yet confirmed. There has been much said about particular climates being favorable to gout, in preference to others ; whether this is true or not, one thing we know from all that has been written on the subject, that England is the hotbed and nursery of gout ; it being, as yet, comparatively a rare disease in America. One of the marks by which a regular paroxysm of gout is said to be distinguished from that of rheumatism is, the suddenness of its onset. This is true with atonic gout, where the constitution is otherwise sound ; but in other varieties, the fit is often preceded by premonitory symptoms, which those who have suffered from it before distinctly understand, and take as a warning of an approaching attack. Those symptoms are : a coldness and numbness of the lower extremities, attended with a sense of prickling along their entire length ; there are frequent cramps of the legs ; a sediment in the urine ; slight shiverings over the surface ; languor, and flatulency of the stomach, and sometimes a pain over the eyelids, or in some other organ. *Dr. Sydenham* thinks that the attacks of gout are more frequent in January and February than in any other months. *Dr. Goode* has seen more cases in the summer and autumn than in any other season. The first attacks are usually in one of the feet, in the joint of the great toe, and most commonly commence in the night ; there is generally a slight chill, succeeded by a fever ; the local pain and swelling increase in violence ; the joint assumes a fiery redness, and the whole body is in a state of great restlessness. The symptoms sometimes remit towards morning, yet they occasionally continue thirty-six hours. They will return during the night, but not with so much violence, for three or four days, or a week, when the inflammation subsides, as by resolution, and the foot soon recovers its strength, as though nothing had been the matter with it. If the patient had been previously indisposed, he now enjoys an alacrity of body and mind beyond what he had experienced for a long time before ; the constitutional indisposition disappearing with the paroxysm. In the commencement of the disease, the paroxysms return only once a year, and perhaps only once in two or three years ; but, if it be not eradicated, it is perpetually encroaching on the constitution, so that the intervals become shorter and shorter, and the attacks become more frequent and of longer continuance.



whence, as *Dr. Cullin* observes, "the patient is hardly ever tolerably free from it, except, perhaps, for two or three months in the summer." Nothing can be more specific, more true to itself, or more distinct from every other kind of inflammation, than that of the gout, when thus exhibited in a regular fit. The inflammation certainly differs from every other kind of inflammation. It never suppurates, never ulcerates, when simple and genuine, however violent may be the attack, and though, to an inexperienced eye, the skin may seem to be on the point of bursting; while in the midst of the severest pain, there is a sense of numbness, weight, and want of energy, insomuch that, if the pain could for a moment be forgotten, the limb would fall paralytic; and although the muscles which move the limb be not affected, they raise it, or drag it along, like a dead weight. If the inflammation run through its course where it first fixes, it subsides and leaves no external discoloration, or internal weakness or debility; and if it make a transfer from one extremity to another, it passes with inconceivable rapidity. The limb to which it is transferred is loaded with all the vehemence of the inflammatory action, and that which was late the seat of pain is restored to perfect soundness. It is rarely the case that any metastasis takes place on its first appearance in a healthy constitution, until various organs have been weakened by its ravages.

Frequent attacks of gout will weaken and break down the constitution, till the mind, as well as the body, becomes a prey to its tyrannical control; consequently, the paroxysms, though more frequent, are less painful than at first. There is no joint which will not alternately suffer by it; no organ in the system that will not be more or less weakened by it; so that, in the language of *Dr. Sydenham*, "the patient exists only to be wretched and miserable, and not at all to taste the happiness of life." It is a remarkable fact, which is but little dwelt upon by medical writers, and which we are not able, perhaps, to account for, that as the system advances in years and debility, and every other secretion progressively fails, that of calcareous earth seems to increase; hence, the bones of aged persons are more fragile, and apt to break upon slight concussion, and the arteries and various other parts become ossified, or loaded with nodules of limestone; and where a powerful sympathy exists between the kidneys and stomach, and either of these is in an inflamed state, we have a larger deposit of the same material

in the kidneys or bladder. A similar deposit of calcareous earth takes place in the weakness of chronic gout; every affected joint becomes loaded with its secretion, which collects and hardens into nodules in its cavities, or in the adjoining cellular membrane, which renders motion uneasy, or destroys it altogether. The limestone, moreover, as it hardens, acts as a foreign irritant to the distended integuments, and produces (what simple inflammation of the gout never does) ulcerations, and an offensive discharge. For the same reasons, calculi in the kidneys are often a sequel of the gout, when it has assumed a chronic form; and the children of gouty parents are said to be hereditarily disposed to both complaints, some of them exhibiting a disposition to gout and to stone in the bladder.

Thus far we have followed up a regular attack of gout, in a constitution otherwise healthy and vigorous; we now proceed to give the symptoms and attacks of the *second variety, or disguised, or lurking gout*. The same diathesis exists in systems of delicate and infirm health, and where there is a want of sufficient energy to work up a fit of inflammation, and throw it off at its appropriate outlets. In such cases, where it becomes aroused into action by any of the causes of excitement above enumerated, it constitutes this second variety of gout. It assumes the guise of various other diseases, as, dyspepsia, hysteria, hypochondriasis, palpitation of the heart, vertigo, hemicrania, with several modifications of palsy, or apoplexy. The stomach and bowels, however, form the chief seat of affection. There is nausea, cructations, and vomiting; and all the symptoms of indigestion follow, and are alternated with severe colic, or costiveness. In the mean time, the disease shows itself at times in some of the joints, by slight, wandering pains, as though it were making an effort to kindle up a paroxysm of gouty inflammation, but which there is not energy enough in the system to accomplish. Hence the pains in the joints cease almost as soon as they appear, and the derangement in the stomach, bowels, kidneys, bladder, &c., reappear and subside, and sometimes, wearing out the system, the disease terminates in cellular abdominal dropsy.

*Third variety. Retrograde or misplaced gout.* It is sometimes the case, that while the general constitution of a gouty subject is sound, one or more of the organs form an exception to the general rule, and are less healthy than the rest; and, as upon an excitement of gouty inflammation in a gouty habit, the

inflammation seizes occasionally upon the weakest part of the body, it makes its assault upon such organs rather than upon the hands and feet; or if it commence in the latter, is readily transferred to them. This constitutes the third variety, or *misplaced gout*. If the general system, at the same time, should be below the ordinary standard of health, when the paroxysm is thus excited, by the force of some exciting cause, the organ affected may evince great languor and painful inertness, as in the second variety, rather than acute inflammation, as in the first variety. The sensation in the stomach, instead of being that of a fiery coal, is that of a cold lump of lead. In the head, it changes from maddening pain to oppressive horror, in which the patient starts from sleep almost as soon as he falls into a doze, from the hideousness of the ideas that rush through the mind, and from distracting dreams. The fit is sometimes transferred to the bladder, in which case there is acute pain in the neck of that organ; a difficulty in making water ensues, and a discharge of thin, acrid mucus from the bladder. The rectum has also been the seat of metastasis, and has evinced various species of affection, as, simple, vehement pain, spasmodic constriction, or hemorrhoidal tumors. When thrown upon the lungs it resembles peripneumonia.

#### TREATMENT.

In applying the art of medicine to the cure of gout, our particular attention must be directed to the state of the patient during the paroxysm and during the intervals, and particularly to his previous habits, which, according to their character, may demand a different, and even an entirely opposite, mode of treatment. Without giving this attention to the case, no wonder should be excited in our minds if a total failure attend our practice. When a regular paroxysm of gout makes its attack, according to Dr. Sydenham, the more violent it is, the sooner it will be over. He also says: "The wisest plan will be to let it alone, and let it run its course without interruption." This is an easy prescription, but it argues but little for the profession. But we rest not here. The best writers say that the fit should be combated by the appropriate remedies for inflammation, such as bleeding from the arm, or, what is thought to be better by some, by leeching the inflamed part. After bleeding by leeches,

a purgative should be given; and in order to put the secreting organs in a good condition, the following :

*Recipe :* Calomel, fifteen grains.  
Rhubarb, twenty grains.

Mix, and give in sirup. Work it off with gruel without salt in it. When the operation is over, the parts should be bathed in cold water, by pouring it on for a few minutes at a time, and repeating it at short intervals for half an hour; then wrap the foot in flannel, and give the following medicine :

*Recipe :* Cream Tartar, one drachm.  
Salts Nitre, one drachm.  
Tartar Emetic, two grains.  
Pulv. Gum Camphor, six grains.

Mix, and divide into six papers. Give one every hour, in a cup of warm tea, till the patient perspires gently. The danger of repelling the disease, and throwing it upon some internal organ, has been proved, by experiment, not to be incurred by this treatment. The cold water should be applied every day, till the inflammation is removed. We have undoubted authority for this. Hippocrates was in favor of it; Zacutus Lucitanus, in 1641; Kelhos and Keck, in 1783 and 1789. Bartholin speaks of the use of snow, as a common application, in 1661, and Pecklin, both of snow and cold water, in the same country. — *Goode*. But this treatment should be properly regulated, and used in proper subjects, or the result may be hazardous. It should never be used, except where the constitution is decidedly sound and vigorous, the attack regular, and the patient young—say under fifty-five years old. It should not be used where the stomach is dyspeptic, or where any disease of the lungs or heart exists, or where the head is subject to violent pain. Where any of the above organs are affected, previous to the attack of gout, instead of using cold water to the inflamed foot or hand, the following will be safer and better :

*Recipe :* Vitriolated Ether, four ounces.  
Proof Whiskey, one quart.

Mix them, and apply cloths wet in it to the inflammation, and as soon as they become dry, wet, and reapply them. This may be continued till the inflammation subsides; and instead of giving the first-prescribed cathartic, the following will be better in this case :

*Recipe :* Senna Tea, half pint.  
Epsom Salts, one ounce.



Dissolve the salts in the tea, and take three ounces every hour, till the bowels are freely evacuated. Or the following medicine may be taken :

*Recipe :* Epsom Salts, one ounce.  
Table Salt, half ounce.

Mix them well, and give a large tea spoonful, dissolved in a glass of water, and repeat every hour, till free evacuations have been procured. Then the cooling powders above prescribed may be given, so as to produce a breathing perspiration. The diet should be light, inirritant, and always below the standard to which the patient has been accustomed ; it is not, however, to be reduced as in a case of ordinary fever. If the patient has been accustomed to drink strong malt liquors, he may now have some good table beer. The room in which he lies should be well ventilated, and his dress light and easy. By strictly adhering to these directions, an attack of regular gout, in a healthy, sound constitution, may be arrested in three or four days.

But we have yet two other varieties to treat ; and however fearness we may be of the disease fixing itself on some internal organ, in the first variety, here we have to guard against it with assiduity ; for there is great danger of a transfer in its location, In the second species, our attempt should be to invite the fixing of the inflammation to one of the extremities, and so relieve the internal organ, or the head, as the case may be. To fill the first intention, the general system must be stimulated by warm tonics, and a generous diet ; and, in order to relieve the internal organ, the feet may be placed in warm water, to weaken the tone of the vessels, and reduce them below that of the affected part. The suffering in this species is almost insupportable. If the head is the seat of pain, it is almost maddening, with great horror, or it resembles apoplexy. If it fixes itself in the stomach, there is a faintness like that of death, or a gnawing and burning agony, or a spasmodic stricture, which feels like cutting the body in two, and renders breathing almost impossible, and is not unfrequently accompanied with a rapid and sinking palpitation of the heart. We must be certain, however, before we prescribe, that these anomalous symptoms are gout. In order to decide this important question, we have to judge by the general character of the patient, his hereditary predisposition, habits of life, and the diseases to which he has been previously subject. In most cases where the stomach is affected during the paroxysm, the warmest cordials are necessary, such as *brandy*, the *aromatic*



*spirits of ammonia*, the *tincture of ginger*, or of *red pepper*. If the bowels are costive, *aloes* or *rhubarb*, in the form of tincture, should be added to the above medicines. The man who is subject to these attacks of gout, should always keep these medicines by him, as the attacks are sudden and violent in their character. But he should resolutely forbear taking anything of the kind, except in case of absolute necessity; for if taken when the system is free from an attack, they will certainly do him much harm, by debilitating the organ, inviting the attack, and rendering the remedy less availing when it is necessary. Ether may be employed to advantage in this form of gout, and particularly in the icy coldness of the stomach, accompanied with numbness of the limbs and palpitation of the heart. Musk, in the hands of *Sir James Pringle*, has given great relief in this form of gout, especially where the lungs and head were the seat of the attack. But, to have the desired effect, ten or twelve grains should be given for a dose, and repeated in a short time, It should be dissolved in ether. But should this fail, large doses of opium or morphine should be given.

*Recipe* : Opium, five grains.  
Tartar Emetic, five grains.

Mix in five powders. Give one every half hour, till relief is obtained, and a gentle perspiration is induced and kept up for some time. The dose has been greatly augmented by some; indeed, if speedy relief is not obtained, four or five grains of opium, with one of tartar emetic, may be given at a dose, and repeated from day to day, till the disease is removed, taking care to lessen the tartar every dose after the first, and as soon as possible, to lessen the opium. When the inflammation begins in the foot, slightly, and will not leave the other part of the system to which it has been transferred, we should invite it to the foot more fully, by strong stimulating liniment, such as camphor and sweet oil, or a mustard plaster, or even by burning cotton or flax on the foot. More wine should be given than usual, and a more generous diet. The bowels should be kept open with the following p<sup>r</sup>. s.

*Recipe* : Aloes, twenty grains.  
Comp. Extract Colocynth, twenty grains.

Form eight pills. Give two every two hours, till they operate.

It is recorded that *Linnæus* effected a cure of gout in his own case by eating strawberries. The story is pleasantly told by *M. Hedin*: "*Linnæus* having, in this pleasant and agreeable man-

ner, driven away an attack of gout, by which he was then assaulted, he persevered in the same mode of relief through five fits, which attacked him annually, every attack being lighter than the preceding, till, by persevering in the use of the same fruit, the disease did not show itself for nearly twenty years." We are told, in some of the foreign journals, of like cures being effected by eating sour cherries. As astringent tonics are often as useful as bitter ones, it is possible the gouty diathesis has in some instances been checked by acids of various kinds. *Alexander Ure*, Esq., of Europe, highly recommends the use of Epsom salts in gout. He prescribes a tea spoonful to be taken every morning in a glass of water; he says the quantity of water should be large, and the medicine taken early in the morning, before breakfast. If, however, it should fail to act when taken in water, it should be dissolved in a gill of senna tea. The *wine of colchicum*, once extolled so highly in gout, is now thought to be a doubtful remedy. In order to arrest the paroxysms and prevent their return, he recommends the use of *acetic ether*, and rectified *coal naptha*. The acetic ether was formerly introduced in nitre by *M. Sedellot*, in the transactions of the Medical Society of Paris. The acetic ether should be applied with gentle friction over the part, to the amount of half an ounce every twelve hours. After each application, the patient should be kept warm in bed. In sub-acute cases, the happiest effects have resulted from penciling the parts over with a camel's-hair brush, dipped in naptha. Care must be taken that pure naptha is not confounded with that used by hatters for making varnish, and lately introduced as a medicine. The properties of the two are quite dissimilar. In some instances, the naptha has evinced a power of keeping off a paroxysm. Pure naptha is a pure hydro-carbon, almost identical in nature to the naptha which appears native on the shores of the Caspian Sea, in Persia, and other countries of Asia. Another valuable remedy is the tincture of *arnica*, and an ointment composed of one part of the extract of *belladonna*, well mixed with eight parts of *simple cerate*. This should be freely applied, three times a day, on the affected joint. These remedies must be aided by proper diet and drink. Abstemious living, compared with the previous habits of the patient, must be rigidly enjoined. In order to get rid of the swelling which succeeds to an attack of gout, the limbs should be supported at a considerable level above that of the body. The more effectually to accomplish this, a box may be made, long enough to embrace the limb from

the hip down, and webbing or a piece of canvass should be nailed in it, beginning low down in the box at the end next the hip, and gradually elevating it to the other end, leaving a small depression for the heel. The *silicate* of potash is an excellent remedy in gout. It may be given in ten grain doses, dissolved in water, twice a day. It exercises a powerful solvent action upon the urate of soda and phosphate of lime, which abound in gouty patients. The chalk stones, as they are called, are dissolved by it, to a certain extent, say many late writers. The *benzoic acid* is another good remedy for the dissolving of the phosphate of lime in gouty patients. It may be taken in doses of five grains, twice a day, in sugar and water. In the interims between the paroxysms of gout, great care should be taken to keep the system in such a state that another paroxysm will not come on. To effect this, the patient should reduce his diet to one half his former allowance, and should positively abstain from spirituous liquors of all kinds, as well as wines and beers. I know that English authors advise the use of a little wine, such as pale Sherry or Madeira; some say Lisbon, and others say good Port, should be taken in moderation, in order to prevent the relaxation of the system, and, consequently, another paroxysm. With all due deference to the opinions of English writers on this subject, I do not believe one word of it. Many writers on gout have recommended these drinks because they love them themselves; and every writer will recommend either the wine he likes best, or that which is the most fashionable in the circle of his acquaintance. Away with it. I know, from experience, that no such drinks are necessary. I had an attack of gout, from hereditary predisposition, in 1827, when I was in my thirty-sixth year of age. I had always been a temperate man in eating and drinking, and had taken active exercise all my life. The attack came on in the joint of my great toe. I relieved it with cold water, and a few cathartics, and low diet. But, just as it was subsiding, so that I could walk imperfectly, I very imprudently walked one evening, with my brother-in-law and some friends, nearly half a mile, (I was in the country,) to see a lime kiln, made of large logs, in blast. I approached too near, and was suddenly thrown into a perspiration. I immediately withdrew from the sensible heat, and sat down on a log, when the perspiration quickly subsided, and I felt chilly, in fifteen minutes I felt no pain in the joint of my great toe, but walked home with as much ease as I ever did, but felt some anxiety about the con-

sequences. Before I reached my brother-in-law's house, I discovered that I was becoming very hoarse, and before morning I had a violent pain in my lungs, and great difficulty of breathing. I bled freely from the arm, and took some active cathartic medicine. I lived on a light diet, and in a week or ten days was relieved from all inflammatory symptoms in the lungs, but I was sorely afflicted with a cough, which lasted me four months. I expectorated freely, especially in the morning. I resolved to eradicate the gout from my system; and, being fully satisfied that it was an inflammatory disease, I determined to pursue the antiphlogistic plan strictly. I, therefore, never partook of an ounce of animal food for twelve months. I took, for eight months of that time, every, or nearly every, night,

*Recipe:* Scammonia, sixty grains.  
Aloes Socot., sixty grains.  
Rhubarb, sixty grains.  
Castile Soap, sixty grains.  
Tartar Emetic, three grains.  
Jamaica Ginger, thirty grains.

Formed into sixty pills. Of these I took from three to six every night, so as to operate once or twice the next morning. I rode in all weathers, day and night. No doubt but I should have recovered much sooner, if I had taken better care of myself. My cough I cured by taking one egg, a tea spoonful of cogniac brandy, a gill of new milk, and as much water, three times a day. I cut the egg fine in a glass with loaf sugar, then added the brandy, milk, and water, stirred and drank it. It is now 1846. Nineteen years have elapsed, and I have not had another paroxysm of gout. In my case it was hereditary. I have known several of my uncles to be confined with gout for weeks, and one of them for months. I have known my mother not to be able to feed herself for two weeks, with rheumatic gout in her hands and wrists; so that mine was a clear case of hereditary gout, and not acquired.

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## ACUTE RHEUMATISM.

THIS disease is characterized by pain, inflammation, and fullness, usually about the larger joints and surrounding muscles; often wandering, with fever; the urine deposits a lateritious sediment. Rheumatism varies in respect to the violence of the fever



and seat of the pain. The varieties mostly determined by the pain are as follows :

*First.* In acute rheumatism, the pain is located chiefly in the joints and muscles.

*Second.* The pain is located in the small of the back, and is called lumbago. Here the pain is seated chiefly in the loins, and mostly shooting upwards.

*Third.* Sciatica. In this form, the pain is felt mostly in the hip joint, producing emaciation in the muscles on that side of the nates, and sometimes an elongation of the limb, in which case the head of the thigh-bone is thrown out of the socket.

The common remote cause of acute rheumatism, as well as the other varieties, is cold or damp applied when the body is overheated, though it may be produced by any of the causes which produce fever. Much exposure to cold, dew, or fog, is a fruitful source of rheumatism in this country. The greatest tendency to rheumatism is found in the most robust, healthy young men, though it may attack persons of every age and habit; yet the young are mostly its victims. The muscles are inflamed, as well as the joints, for motion produces extreme pain, and the muscles are sore to the touch; but the most acute pain is in the joints. How far the remark of *Sir C. Wintringham* is true, when he says that "those who have suffered amputation are most liable to rheumatism," we cannot say; but one thing we can say, he is a man of much experience and observation, and is not to be lightly accredited. As a general rule, it may be asserted that rheumatic inflammation does not tend to suppuration; but it has been known to take place in a few rare instances. The inflammation in rheumatism is of a peculiar kind. The limbs swell considerably, and generally the swelling is accompanied by an alleviation of the pain. Sometimes the pain is felt before any fever appears; but in other cases the fever appears first, and the pain and swelling follow in a few days. All the joints of the body are liable to its attacks, but the last joints of the fingers and toes are less liable to it than any others. It may attack a finger or toe, and be confined to it alone; but this is not very common. It rather displays its fugitive character than its local disposition. It often wanders from the hands and wrists to the shoulders, hips, knees and feet. When this is the case, the pain is excruciating. The fever rarely has a clear intermission; the pulse ranges from 95 to 100; the tongue is white, and the patient has considerable thirst; the urine is often pale at first, but soon becomes highly



colored, and deposits a red sediment. There are frequent copious and clammy sweats, but the skin still feels hard and harsh. The parts affected with pain, however, do not sweat much. The perspiration will not relieve the system as long as it is clammy, and the skin feels harsh, and a sense of chilliness creeps over the body, or any part of it, while the perspiration is going on. The fever, which regularly increases in the evening, rises higher in the night, and the pain becomes more severe, and frequently shifts from one joint to another. Lumbago, or rheumatism in the back, has been mistaken for an affection of the kidneys, or ureters. But in affections of the kidneys, especially when a stone or gravel is lodged there, the pain shoots down the thighs, and one or both testicles contract very much, and are painful; and the urine does not flow freely and uniformly. What the ancients called *ischiatrica*, the European writers call rheumatism of the hip joint, and the Americans call it *sciatica*. Where the sciatic nerve is the seat of the disease, I have treated it under the head *Sciatica*, and where the disease is seated in the joint of the hip, and is called, in strict medical language, *morbis coxarius*, I have treated it under the head, Disease of the Hip Joint.

## TREATMENT.

As acute rheumatism is evidently an inflammatory disease, the cure should be commenced by taking fifteen or twenty ounces of blood from the arm, which should be succeeded by an active purgative.

*Recipe*: Calomel, ten grains.  
Jalap, twenty grains.

Mix, and give in sirup. As soon as the operation is over, if the fever still continues, give the following cooling powders:

*Recipe*: Cream Tartar, sixty grains.  
Salts Nitre, forty grains.  
Tartar Emetic, two grains.  
Opium, one grain.

Mix, and divide into twelve powders. Give one every hour, in balm, hyssop, or sage tea. If they produce a free and healthy perspiration, the patient will be better the next day. If they do not produce this effect, and the fever returns, with a continuation of the pain, he should be bled again, and take the following medicine:

*Recipe*: Senna Tea, half pint.  
Epsom Salts, one ounce

Dissolve the salts in the tea. Half a gill may be taken every half hour, till free purging is induced. After the operation is over, the wine of colchicum may be given, commencing with thirty drops in water, three times a day, till free purging is produced. If it should not purge freely the first day, the dose must be increased ten drops each time, till it has the desired effect. Where the wine of colchicum cannot be had, a saturated tincture of the root of the racemosa (rattle root) may be given in the same manner in which you would give the wine of colchicum, till it produces the same effect. Some authors prefer the racemosa to the colchicum. My experience with it is favorable. There are various methods of treating acute rheumatism by different authors.

*Dr. Corregan* treats it with opium. He gives two grains every three hours, till ten or twelve grains are given. This he repeats daily, till the violence of the disease is conquered, opening the bowels every other day with castor-oil, salts, or senna tea. He tells us that in three or four days he succeeds in performing a cure.

*A. L. Wigan* treats it with the root of colchicum. If the fever is very high, he would take a small bleeding. Then commence with eight grains of the powdered root, (be sure you have a good article,) and repeat every hour. It may be taken in any way the patient chooses, till active vomiting, free purging, and free perspiration are produced. Some patients will take twelve or fourteen doses, others will take only five or six, before the effect is produced. The patient should, in all cases, be desired to keep it down as long as possible; the more he takes the better. By taking some aromatic in the mouth, he will be enabled to take a greater number of powders before he pukes. After the puking is over, the patient generally sleeps before the purging commences. He says that when the whole process is over, the pain, swelling and fever, generally leave the patient, and he soon recovers. The diet should be tea and bread for a day or two, and then he should gradually return to the ordinary diet. He, however, premises this treatment by an injection of aloes, if the patient is costive.

*M. Aran* cures acute rheumatism with saltpetre alone. He gives twenty grains every hour, in some agreeable tea, till an ounce is taken in twenty-four hours; from eight to twelve days being required to effect a cure. The visible effects are, profuse perspiration, reduction of fever, gentle purging, and a copious

discharge of urine. *Dr. Brockelsby* gives the saltpetre in larger doses, and in some mucilaginous drink, but to the same effect with *Dr. Aran*.\*

*Dr. Hope* gives a rational treatment of acute rheumatism of the joints. To a patient of a robust and full habit, after one or two free bleedings, give eight or ten grains of calomel, with a grain or a grain and a half of opium, according to the severity of the pain; to be repeated every night, and followed in the morning with an active cathartic, so as to ensure four or five free evacuations. With this treatment, he gives also three drachms of salts dissolved in water, with twenty drops of the wine of colchicum, and five grains of Dover's powder, every day. When the pain and swelling are greatly abated, if not almost entirely gone, (which *Dr. Hope* affirms will happen, often within two days, and almost always in four,) the calomel is to be omitted; or it is to be omitted sooner, if the gums become sore. The opium is, however, to be continued at bedtime, and in severe cases, to be repeated at noon, and the colchicum and cathartic are still given as at first. *Dr. Hope* considers it a case of exception if the patient is not well in a week. He states the following as the great advantages of his plan of treatment: "*First*. That the patient is generally sound, well, and fit for work, in a week or ten days after the pains cease. *Second*. That the gums are rarely affected, especially if you previously ascertain that the patient has not a morbid susceptibility of mercury. *Third*. That it is rare to see inflammation of the heart, if the treatment is early begun,—not oftener than one in a dozen cases. *Fourth*. That if the slightest symptoms of inflammation of the heart should come on, a few extra doses of calomel and opium, given every four or six hours, will generally affect the constitution in twenty or thirty hours; which, with two or three cuppings or leechings on the region of the heart, almost always places the patient in a state of safety." The above course of treatment carries with it much good reason and scientific knowledge.

\* Another mode of using saltpetre is, to dip flannel drawers and shirt in a saturated solution of saltpetre, and dry them by the fire, before putting them on. They should not be worn more than twenty-four hours without thoroughly washing them and again saturating them with the saltpetre, as before, and drying them before putting them on. A perseverance in this remedy for a few weeks, has cured obstinate cases of chronic rheumatism. Two suits are necessary, as the patient should not be without them for an hour.

To sum up the whole treatment of inflammatory rheumatism : if the patient is a strong, plethoric subject, he should be bled from sixteen to twenty ounces ; then take a purgative of calomel and jalap. If the next day finds him still with fever and acute pain, he may be bled again, and then give the calomel and opium, as prescribed by Dr. Hope ; or the saltpetre, as prescribed by Dr. Aran ; or the colchicum, by Dr. A. L. Wigan. I can safely say, that these modes of treatment may be safely relied on, if the proper precautions are taken, and the constitution well marked, in which they are given. In the treatment of rheumatic fever, the diet should always be light, and the drink not very cold. Great care is necessary, in convalescence, that the patient does not relapse, as, when the system is once predisposed to rheumatism, it scarcely ever loses that predisposition.

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## CHRONIC RHEUMATISM.

THIS form of rheumatism is characterized by pain, weakness and debility of the larger joints and surrounding capsular ligaments and muscles. The pain is increased by motion, and relieved by warmth—the limbs spontaneously or easily growing cold—and the fever and swelling are slight, when compared to acute rheumatism. The fever is often almost imperceptible. Chronic rheumatism has, perhaps, as many or more varieties than inflammatory or acute rheumatism. It may be seated in the joints, large or small, or in the loins or hips ; but seldom in the chest. There is, also, another form of chronic rheumatism, which attacks the periosteum of the bones, and raises nodes on the legs, arms and head. This form is the sequel of syphilis which has been badly treated. There is yet another form of chronic rheumatism, which is the sequel of the abuse of mercury, and exposure. This attacks the tendons and contracts the limbs. The symptoms of most of these varieties are pretty much like those of acute rheumatism, only there is less fever, and sometimes none at all. The parts affected are less swollen, with less heat and throbbing, and seldom any night-sweats of a clammy nature. The tongue is generally a little white, and the pulse rarely over eighty strokes in a minute. This form of rheumatism rarely attacks the heart or chest. That form which is the result of badly treated syphilis, and the abuse of mercury, is more



painful at night, than any other of those forms of the disease. Generally, the appetite is not much impaired. That form which produces nodes, and that which affects the tendons, are often complicated together, the causes being generally combined. This, as well as the other forms of the disease, will reduce the patient to skin and bones; and if it be not cured, the inflammation which is seated in the periosteum, or covering of the bones, will communicate itself to the substance of the bones, and they will finally become rotten, and break or split to pieces, as I have several times seen. It is hardly necessary to say, when the disease has progressed thus far, that death will be the result. The other forms of the disease, though they do not destroy the bones, destroy the elasticity of the articulations, and render the joints stiff, and cause the muscles to waste away; the patient becomes emaciated, and finally dies of marasmus, or general wasting of the system, rather than of acute pain, or fever. Cold, the common cause of the acute, is also a common cause of chronic rheumatism, even when the chronic has not succeeded to the acute. But when chronic rheumatism occurs without having been first acute, it is when the system is peculiarly predisposed to rheumatic action. Chronic rheumatism is evidently a disease of debility.

#### TREATMENT.

Debility from exposure, or a predisposition to the disease lying at the foundation, calls for a different course of treatment from that necessary to be used in the cure of acute rheumatism. Bleeding, therefore, will rarely be found necessary in the cure of this form of rheumatism, except occasionally we may find it necessary to use leeches on nodes, or on the large joints where effusions have not taken place. In the form of this disease where it has succeeded to acute rheumatism, the warm, active balsams and resins, as those of copaiba and guaiacum, will be found serviceable. The following formula may be given:

*Recipe:* Pure Gum Guaiacum, forty grains.  
Hepatic Aloes, forty grains.  
Comp. Extract of Colocynth, forty grains.

Form twenty pills. From four to six of these pills may be taken every night at bed-time, or as many as will operate two or three times the next day. During the day, the following preparation may be used:



*Recipe* : Balsam Copaiba, one ounce.  
Oil Cajaput, half ounce.  
Oil of Turpentine, half ounce.

Mix. Take a tea spoonful three times a day, on sugar, or in some mucilaginous drink, as flax-seed or slippery-elm tea. The oil of amber has been given to advantage, in twenty or thirty drop doses, three times a day, in sugar; or the following may be used :

*Recipe* : Oil Cajaput, half ounce.  
Spirits Camphor, half ounce.  
Laudanum, half ounce.

Mix, and give forty drops three or four times in twenty-four hours. If the pain is great, the volatile tincture of guaiacum, given in tea spoonful doses every six or eight hours, has, in some cases of cold chronic rheumatism, effected great things; others have succeeded best with the plain tincture. The following form may be used :

*Recipe* : Pure Gum Guaiacum, one ounce.  
Proof Whiskey, one pint.

Dissolve the gum in the whiskey, and take a table spoonful in sweet milk, three times a day. The bowels should be kept open with the following pill :

*Recipe* : Scammonia, thirty grains.  
Aloes Socot., thirty grains.  
Pulv. Rhubarb, thirty grains.  
Castile Soap, thirty grains.  
Jamaica Ginger, fifteen grains  
Tartar Emetic, three grains.

Form thirty pills. From three to five of these may be taken at bed-time, and repeated every night, so as to procure one operation the next morning; while these are being used, the following liniment may be rubbed over the affected part :

*Recipe* : Spirits Camphor, one ounce.  
Spirits Turpentine, one ounce.  
Sweet Oil, one ounce.  
Oil Juniper, one drachm.  
Oil Amber, one drachm.  
Carbonate Ammonia, one drachm.

Mix these articles perfectly, and rub them into the part affected three times a day, at least fifteen minutes each time. The hand is the best to rub them in with. Before every fourth rubbing, the part should be well washed with soap, vinegar and water. Frequent friction with the hand on rheumatic swellings, will always be found of service, both in allaying pain and reducing swelling.

We now give one of the new remedies for chronic rheumatism,

as used by Dr. Curtis, of England, in 1840. He gave several cases in detail, setting forth the beneficial effects of aconite, in chronic rheumatism. But this is a very powerful medicine, and should not be given internally, except by an experienced physician. Where the pain is fixed in any particular part, and there is little or no swelling, and no fever, the bowels should be opened by a gentle laxative; then *one drachm* of the tincture of *aconite* may be rubbed in over the painful part. As the aconite produces such a numbed state of feeling in the fingers, it should be rubbed in with a small mop tied on a stick. *Dr. Curtis* has given several cases where this remedy was applied by himself, and one application produced a cure in every instance. During the application, the patient feels alternate sensations of cold, heat and numbness. All that is necessary afterwards, is to regulate the bowels, and the cure is completed. This, like all new remedies, is too highly extolled, but is certainly worthy of a trial. Where the rheumatism is fixed in the hip, in the form of sciatica, this remedy is very good. The author had an attack of this form of rheumatism, a few months since, and two applications of the tincture of aconite, of one drachm each time, removed the disease entirely.

We now subjoin a case, it being one of many, of chronic rheumatism, given by *Dr. James Haygate, of Scotland*. Elizabeth Holmes, aged forty-three. "Admitted into the hospital, Aug. 21st, 1846. Pain, with loss of power in the lower extremities; knee joints much swollen, and have been so for many months, with inability to stand; pulse quick, tongue clean, bowels confined; she says various means have been used, but hitherto without any effect. The following recipe was given:

*Recipe*: Hydriodate Potassæ, six grains.  
Compound Decoction Sarsaparilla, two ounces.

Mix. To be taken three times a day, and a pill composed of:

*Recipe*: Extract Rhubarb, twenty grains.  
Extract Conium, twenty grains.  
Blue Mass, twenty grains.

Form ten pills. One pill must be taken every night.

"23d. Progress of the case. A vapor bath to be used every other day, and the following liniment to be applied to the limbs:

*Recipe*: Spirits Turpentine, one ounce.  
Sweet Oil, one ounce.

"28th. Improving; increase the hydriodate of potash to eight grains at a dose. 30th. The medicine agrees very well, the

joints not so stiff, less painful and less swollen; to have crutches. Sept. 6th. Limbs more pliable. Increase the hydriodate of potash to ten grains per dose, and substitute the camphor liniment for the turpentine. 23d. Has continued improving since last report. Increase the hydriodate of potash to fifteen grains. 27th. Gums slightly turgid. Omit the pills. 30th. Joints reduced to almost their natural size; can now walk about tolerably well; to be made an out-patient, and gradually leave off the medicine."

I have given this case in detail, that it may answer as a guide for others to go by.

Several other virtues of this medicine are given by Dr. Haygate, in secondary syphilis, and some severe cases of affections of the wrist joints, and nervous affections of the loins, with loss of power in the lower extremities. Dr. Graves, of England, confirms the statements of *Dr. Haygate*, on the great utility of the above medicines in chronic rheumatism. Hydriodate of potash, in the syphilitic form of chronic rheumatism, is an invaluable remedy. I have used it, in the following form, with great success:

*Recipe:* Hydriodate Potassæ, sixty grains.  
Pure Water, four ounces.

A tea spoonful of this solution is to be taken three times a day, in the following infusion:

*Recipe:* Spanish Sarsaparilla, two ounces.  
Dandelion Root, two ounces.

Cut the roots fine. Mix them, and divide into eight papers. Put one of these papers into a pitcher at bed-time, and add to it a pint of boiling water; let it stand till morning. Take of the above solution, a large tea spoonful, in a half gill of this decoction, three times a day, and drink the remainder at intervals through the day. One paper of the roots should be prepared every night, and taken with the drops, &c., the next day. It is important that the sarsaparilla be not boiled, for this process evaporates the most active and volatile parts, which contain its principal medical virtue. At the same time, it is important that the limb should be rubbed with some stimulating liniment, as the compound liniment of six articles above given, and the pills there prescribed, to keep the bowels open; or from twenty to sixty drops of the wine of colchicum may be given three times a day, in the above infusion, to keep the bowels open. The diet should be light. In those cases where nodes appear on the

bones, the pill prescribed by Dr. Haygate I have found to answer an admirable purpose. In all cases resulting from badly cured syphilis, and the abuse of mercury, and exposure, the warm bath will be found of great benefit. It may be taken in the form of vapor or hot water. If the pain is severe at night, opiates must be given with an auxiliary, as follows:

*Recipe:* Pulverized Root of Colchicum, five grains  
Pulverized Opium, one grain.

Mix for a dose, and give it in any convenient vehicle. The diet should be nourishing, but not gross; the drink, cold water. Perhaps no disease is more aggravated by spirits either distilled or fermented, than either chronic or inflammatory rheumatism. It therefore should be avoided in all cases. Beer and porter should also be avoided. When the pain is acute, and there is not much fever, the aconite presents us with an important remedy. Where that cannot be obtained, mustard plasters, applied and kept on till they almost draw a blister, will do good. If the pain is seated in the knee joint, under the cap, a mustard blister is preferable to a fly blister. When the patient begins to walk about, great care must be taken to prevent a relapse. Moderate exercise on horseback, or in a carriage, in good weather, will be beneficial.

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## WHITE SWELLING.

THIS disease is characterized by a tense, colorless, permanent swelling, chiefly situated in the larger joints. The inflammation progresses slowly, and is deeply seated; the pain is fixed and severe; the swelling suppurates imperfectly, and the fever assumes the hectic form. As we have said before, this inflammation, like that of rheumatism, attacks the larger joints in preference to the smaller ones. It runs through its course without perfect suppuration. No matter how severe its symptoms and fatal its termination, it has a manifest relation to both acute and chronic rheumatism. The most common cause of white swelling is a strain or bruise of the part. But this cause does not operate equally in all persons to the production of the same result; for there is in some persons a predisposition to white swelling, as there is a predisposition in some persons to gout or rheumatism. And this disposition shows itself both in strong and weak consti-



tutions. In the weak or lax fibre, we generally find the patient disposed to a scrofulous taint, and here the disease manifests itself under two distinct forms, and seats itself on different parts of the joints or bones, and occasionally between the joints. We are required to use different modes of treatment for the cure of the two species.

The first variety, *to wit*, that which is so accurately described by *Dr. Bellonaleers*, is the rheumatic white swelling. It mostly occurs in young, plethoric persons, in whom the rheumatic disposition is predominant, or rather that firm elasticity of health and fibre, which, upon the application of casual causes, gives rise to rheumatism as well as white swelling. These causes I have stated to be strains and other external injuries to the large joints, as bruises, luxations, &c. But, like rheumatism, it may be excited by a current of damp air. The pain is diffused through the joint; the swelling is considerable from the first; and, on dissection, the inflammation is found to have originated, and to be especially seated, in the synovial membranes, and the surrounding ligaments of the joints; though, according to *Mr. Brodie*, it sometimes commences in the cellular substance around the joint. The swelling feels tense and elastic, but the skin is but little discolored at any time. There is not much effusion of coagulable lymph, but a considerable surplus of synovial fluid,—that is, the fluid within the joint. Not less than four ounces were discharged in a case related by *Dr. Simon*. The cause of the disease in *Dr. Simon's* case was of a singular kind. It consisted of a small supernumerary bone, somewhat above the size of a kidney bean, which laid loose in the knee joint, and was covered with cartilage. At first it seemed to be attached, for the patient did not seem to have noticed it till about the commencement of the inflammation, when he frequently felt it as a hard body, of the nature of which he was ignorant. It was situated immediately under the cap of the knee—the patella. He could get no ease, till, by chafing the joint with his hand, he made it disappear. He was cured by removing it by incision. The inflammation in this disease, if not soon checked, runs into the cellular substance, and even the integuments of the joints; but, in this variety, it rarely affects the bone; yet it has as little tendency to the adhesive or suppurative character, and hence the parts by absorption become shining and glazy. It occasionally proceeds further, and the surrounding parts become affected. Finally, pus is secreted, and the covering of the bone ulcerates



and the bone itself is rendered carious, so that, on an examination of the joint by dissection, its interior displays a confused union of different materials and substances, blended together in a common mass. It is to be lamented that this variety of white swelling is not generally noticed as soon as it should be; for when a strain occurs in the knee or elbow of a robust and high-spirited schoolboy, he will generally rather suffer the pain it produces, as long as he can, than be deprived of his liberty. When, however, the disease produced by such occurrences is treated at an early period, it readily yields in a few weeks. The application of a number of leeches, and a succession of blisters, to the affected part, will soon remove the inflammation. If the joint be the knee or ankle, it should be placed in a reclining position; for perfect quiet is of the utmost importance. The joint should be kept as much as possible free from motion. If the pain should continue, and the swelling progress, a relaxing poultice should be applied, such as white swamp lilies, or Jamestown weed, or the leaves of the common buckeye. But should these fail to reduce the swelling, and the fever continue, then a seton should be deeply applied, which should give free vent to the matter which is contained in different cells, now contained in and about the joint, and which so much endangers the loss of the joint, and produces enchaloses. As the bone, in this form of the disease, does not easily become affected, nor even the periosteum, the use of the joint may be saved by means of the seton. A very considerable degree of stiffness may remain for a long time afterwards, but will, in most cases, yield to the application of warm animal oil, if freely applied with the hand, and persevered in for a considerable time. The friction should be continued at least an hour each time, and repeated twice a day. The stiffness is generally the effect of quiescence of the joint, and not of inflammation in the tendons. An abrasion of the surrounding cartilages of the joint rarely ever causes a union of the ends of the bones; therefore perseverance in friction gives the more hope of success. When neither setons nor friction will produce any benefit, the only remaining hope is amputation; which must be performed by an experienced surgeon. It will be found, after amputation, and all the soft parts are removed, that the bones are enlarged, and full of cancellated holes, like honey-comb.

## THE SECOND VARIETY OF WHITE SWELLING.

This form commences, and for the most part is seated, in the bone itself; originating, as *Mr. Brodie* says, "in the cancelli, or spongy part of the bone." The pain, therefore, in this case, is more circumscribed, and appears to shoot almost from a point; and the swelling is inconsiderable, when compared with the other variety, or first described form of this disease. The pain, however, is very acute, and the least attempt at motion increases it; so that, in consequence of the pain on motion of the limb, it is kept quiet, and a stiffness of the joint is a very common result. The inflammation in this form of the disease proceeds more slowly than in the other, but it finally produces the same effect, and the tumor ultimately acquires the same elastic feeling; enlarged veins appear on the surface, and collections of matter take place in different parts of the swelling; these little abscesses break, one after another, and discharge an ichorous, or cheesy, purulent matter, and small scales of bone are occasionally thrown out at the openings. This is the scrofulous variety of *Mr. Bell*. And although it is not always confined to scrofulous subjects, it is, most commonly, to those who give proofs of this predisposition, or of an approach to it. *Mr. Hunter* says, he "considers that all such collections of matter give proof that the patient is of a scrofulous habit." They are most commonly in young subjects, and are seldom found in the full-grown, or old. The swelling is not proper inflammation, nor the suppuration pure pus. The author has seen this form of white swelling seated on the leg, and also on the thigh, without touching the joint. The causes are, occasionally, those which produce the other varieties. But the disease most generally commences without our being able to trace it to any occasional cause whatever. It is far more disposed than the preceding to terminate in a fatal hectic fever. The treatment is disheartening, and the prognostic most melancholy; though I have seen many cases even of this form of the disease cured. Where the disease is evidently scrofulous, the treatment should be that for scrofula — which chapter see. The removal of the limb rarely proves a cure, but only paves the way to the development of the disease in some other joint. I have, in several instances, where the disease has been seated in the long bones, as the leg or thigh bones, even near to the joint, laid the muscles open to the bone.

the whole length of the diseased part, and removed, with a strong instrument, all the semi-cartilaginous substance, and scraped and polished the bone; then, by the application of the tincture of myrrh, with the corrosive sublimate dissolved in it, destroyed the morbid action in the bone, and caused an exfoliation, or scaling of the bone, to take place, and then, by using the remedies prescribed in scrofula, cured the disease. In one instance, after exposing the ossio-fungoid substance, I removed it with a firming chisel, it was so hard, and afterwards cured the patient. The substance removed was as large as three fingers laid together. The limb had been previously condemned to amputation by several physicians. The patient, however, who had not walked for years before, became an active servant, and could not have been purchased for six hundred dollars. In another instance, I removed the entire fibula, (the small bone of the leg,) and made a perfect cure. I scraped the large bone, and removed a number of scales from it. The instep had been so affected as to stand forward in more than a straight line from the great toe to the knee. But, by a splint made in the shape of the back half of a boot, and placed behind the heel and leg, and under the foot, with broad ribbons, I gradually brought the instep back, and restored the use of the joint. This required six months to effect a cure; but it was finally perfect, and the young lady afterwards walked as well as if she had not lost the bone from her leg, or had had an enchalosed instep. In the early stage of this disease, large and frequently applied blisters will be of great service. The tartar emetic plaster has done much good in those cases; but no plan of treatment has ever succeeded in my hands like that used for the cure of scrofula. It is too tedious to repeat here; see the chapter on that particular disease.

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### SCIATIC, OR SCIATICA.

THIS disease is very analogous to rheumatism. It is situated in the sciatic nerve, either in one or both hips. The pain extends from the small of the back, low down, outwards, and downwards, behind the trochanter major (what most people think is the hip joint.) When the sciatic nerve is much affected, the pain not unfrequently extends down the outer and back part of the thigh, and in some cases extends even to the ankle and heel. The inflammation in the sciatic nerve and its facia differs

from rheumatic inflammation in this, that very little or no swelling attends it. The parts rather shrink. Indeed, if the disease continues for a length of time, as it will if not cured, the limb not only shrinks, but perishes away, and from elongation of the muscles from relaxation, becomes longer than the other. The pain sometimes is almost insupportable, when the inflammation runs high.

The principal causes of this disease are, injuries done to the back, by falls, bruises, or strains; colds, exposure to damp air, or wearing wet clothes; fogs, &c. The fever is not high. The tongue is generally not altered in appearance; and when the disease becomes chronic, the appetite is not impaired, unless the disease is of a violent character. A man may sit at his table and partake of a hearty dinner, and not be able to rise from it without assisting himself by his hands upon the table; but, after he has straightened himself, he can walk off pretty well; his greatest difficulty is, in sitting down and rising up. After he gets warm in bed, if the disease is not violent, he sleeps well; but when the inflammation is active, he can neither sleep nor walk, but is an object of the most excruciating suffering. If the disease is suffered to progress, he finally becomes emaciated, and the symptoms and sufferings all become aggravated, and he dies a miserable victim of pain and suffering.

## TREATMENT.

If this disease is treated early, and the patient bled freely, and a few active doses of medicine given, the disease will generally be cured in a few days. The medicine may be:

*Recipe:* Calomel, twenty grains.  
Jalap, ten grains.

Mix, and give in sirup. Or, if calomel is likely to salivate, as it will in some cases, give the following:

*Recipe:* Senna Tea, half pint, (*strong*.)  
Epsom Salts, half ounce.

Dissolve the salts in the tea. This should be taken at three draughts, half an hour apart. If these remedies have been repeated two or three days, and relief is not obtained, then use the following: *oil of colocynth, one drachm.* This should be carefully rubbed into the skin, over the painful part; the friction should be continued for at least half an hour. The end of the finger should be used. Be careful to wash the hand well before

it is applied to the face. If the oil of colocynth cannot be had, *croton-oil* may be used in its place. This is *Dr. Genelli's* remedy. *M. Martinet* speaks in the highest terms of *the oil of turpentine* in the cure of sciatica. His method of using it is, to give a large tea spoonful three times a day, in some convenient vehicle. He advises the following formula :

*Recipe :* Oil Turpentine, three drachms.  
Sirup Peppermint, two ounces.  
Sirup Orange Flowers, one ounce.  
White of one Egg.

The whole to be well mixed ; of which one table spoonful should be taken morning, noon, and night. If the turpentine should sicken the stomach, or pain the bowels, a few drops of laudanum should be added to each dose. This medicine will sometimes produce a flush in the face, and some pain in the head, especially in weakly and delicate females ; but these symptoms will subside without injury.

Where there is no constitutional disease that produces the sciatica, such as syphilis, the chances of a cure are pretty certain. If the bowels are affected with heat and pain, and they sometimes are, if the dose is increased before the desired effect is produced, the carbonate of magnesia will relieve it ; three drachms of which may be taken in water, or eaten dry ; or a table spoonful or two of honey may be taken—the magnesia is the best. The turpentine often produces a glow of heat in the throat, then in the stomach and bowels ; a perspiration, more or less profuse, is apt to succeed. *Martinet* declares that three or four days' use of this article will cure almost any case, either acute or chronic. *Dr. Robert J. Graves*, of Europe, treats sciatica in the following manner : First, bleed the patient freely from the arm, and then leech the affected part. Then he would give the following medicine :

*Recipe :* Acetate Morphine, three grains.  
Calomel, six grains.  
James' Powder, two grains.

Mix, and divide into eight portions. Give one every three hours, till the gums become affected. But in chronic cases, where the patient wishes to follow his occupation, he strongly recommends the hydriodate of potassa, which is to be given in the following manner :

*Recipe :* Decoction of Sarsaparilla, one pint.  
Hydriodate Potassa, one drachm.



Dissolve the potassa in the sarsaparilla. One fourth of this is to be taken daily. He does not restrict his patient to low diet or warm drinks. The tincture of aconite, applied with a small mop over the pain, using one drachm every day for a few days, has effected much good in some cases. But these remedies may all fail, and do fail occasionally. Then we must have recourse to a succession of blisters; the *carbonate of iron*, in large doses, twenty or thirty grains three times a day, in sugar. *Fowler's solution* has done good in some cases, — five drops three times a day, in sweetened water. If it should produce pain in the bowels, a dose of *castor-oil* should be taken immediately, and the solution suspended for a few days. The blue pill and iodine, taken internally, is a good remedy. A slight salivation has cured in some cases. Dover's powder and the sulphate of quinine combined, have been given with good effect, when the patient suffers great pain, and is very much debilitated.

*Recipe:* Sulphate Quinine, twenty grains.  
Dover's Powder, thirty grains.

Mix, and divide into six powders. One may be given every six hours, in sirup. When the blue pill is used, ten grains should be given, three times a day, and ten grains of Dover's powder at bed-time; if this is not sufficient to procure rest, twenty grains may be given. If the quinine affects the head, salicine should be used in its stead, but double the quantity must be given. If the sciatica is the result of a badly cured syphilis, mercury to salivation must be used. (See SYPHILIS.)

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## HEMOPTYSIS, OR SPITTING OF BLOOD.

THIS disease is known by a discharge of red blood, by spitting. The blood, in every instance, comes from the lungs in hemoptysis. It is always attended with more or less coughing. The discharge of blood is usually preceded by a discharge of saliva, which tastes more or less saltish. There is generally a sense of weight about the region of the skirts, and more or less pain in some part of the chest. Hemoptysis may be easily distinguished from hemorrhage from the stomach, as in this case the blood is thrown up by vomiting, is of a dark color, and at first mixed with the contents of the stomach. The blood from the lungs is spit up, is of a florid color, and mixed with froth or mucus. A

spitting of blood is most apt to occur between the ages of sixteen and twenty-five years. It may be occasioned by any violent exertion, either in running, jumping, wrestling, speaking loud, or blowing wind instruments; likewise by wounds, weak blood-vessels, or plethora, hectic fever, a violent coughing, irregular living, excessive drinking, or the suppression of some accustomed discharge, such as the menstrual or hemorrhoidal. It may also be occasioned by breathing air which is too much rarefied to expand the lungs properly. Those who have a narrow, or very flat chest, are most disposed to this discharge. In these cases, the proportions are not well developed. The shoulders are generally prominent; the make is delicate, and the temperament sanguine. Even in such persons, the discharge is frequently brought on by the causes above enumerated.

Spitting of blood is not always to be considered a primary disease; it is frequently only a symptom; and in some diseases, such as pleurisy, and inflammation of the lungs, and many fevers, it often occurs, and is a favorable omen. Sometimes spitting of blood is ushered in by a hard, dry cough, and sometimes by a cold, shivering fit, and cold extremities, with pains in the back and loins, flatulency, lassitude and costiveness. The blood, as before stated, is generally thin and clear red, and mixed with froth; but when it lies for some time in the air-cells of the lungs, it becomes dark and thick. If no symptom of consumption has preceded or accompanies the hemorrhage, or where it leaves behind no cough, or difficulty of breathing, or other affection of the lungs, and where the person is otherwise of a healthy and strong constitution, unless the hemorrhage be very great, it will be attended with no danger. But if the person is of a lax fibre and delicate habit, it will be difficult to cure. It seldom takes place to such a degree as to prove fatal at once, unless there is a rupture of some large blood-vessel. The danger will, therefore, be in proportion as the discharge comes from a large or small blood-vessel. When it proves fatal, in consequence of the rupture of a large blood-vessel, there will be found, on dissection, a considerable quantity of clotted blood between the lungs and pleura, and there is more or less inflammatory appearance in the ruptured part. If the hemorrhage returns frequently, it will be likely to terminate in consumption.

## TREATMENT.

In the treatment of this disease, the condition of the system must be taken into consideration. If the patient is robust and full of blood, and the bleeding is likely to be profuse, the patient should be freely bled from the arm; the most abstemious diet should be used, and strict tranquillity observed. The bowels should be kept open with cooling purgatives, such as *Epsom salts* or *Rochelle salts*, *cream tartar* and *magnesia*, &c. If the hemorrhage is obstinate, the following medicine should be given:

*Recipe*: Pulv. Ipecac., twenty grains.  
Pulv. Opium, two grains.

Mix, and divide into ten powders. Give one every hour, in sugar, till all are taken. If the hemorrhage should continue, the following may be given:

*Recipe*: Powdered Alum, two drachms  
Honey Strained, one gill.

Mix them well. A tea spoonful may be taken every ten minutes, till the bleeding stops. If this fails, the patient should eat as much table salt as the stomach will bear without puking. I have known each of the above remedies to have the desired effect in arresting hemorrhage from the lungs. The above remedies are generally at hand, and can be used at any time. The following mixture is very good:

*Recipe*: Elixir Vitriol, twenty drops.  
Water, an ounce and a half.  
White Sugar, one drachm.  
Laudanum, twenty drops.

Mix, and give it in three portions, fifteen minutes apart. The drink should be cold, and the patient keep quiet. Much benefit is derived sometimes, by placing the hands and feet in warm water for several minutes; this invites the action to the extremities. *Dr. Thomas* says, "The immersing of the hands and feet in cold water should in no case be neglected in passive hemorrhage from the lungs." The application of cold water to the genitals in such cases, has several times proved to be a good remedy in my hands. Lemonade is a good drink in such cases. Where the system is very much debilitated, so that blood cannot be taken from the arm, the following medicine should be given:

*Recipe*: Pulv. Alum, twenty grains.  
Pulv. Gum Kino, twelve grains  
Pulv. Opium, one grain.

Mix, and divide into four papers. Give one every hour, in sugar and a few drops of water, till the hemorrhage ceases Or you may give:

*Recipe:* Tincture Kino, half ounce.  
Tincture Catachu, half ounce.  
Laudanum, two drachms.

Mix. Give thirty or forty drops for a dose, and repeat every half hour, till the bleeding ceases. Or you may give the following.

*Recipe:* Sugar Lead, twenty grains.  
Pulv. Opium, two grains.

Mix, and divide into four papers. Give one every half hour, in urgent cases, till all are taken, or the hemorrhage stops. They should be followed by a dose of *castor-oil*. Digitalis is a popular remedy, and is used by some of our best practitioners. The tincture is not so good as the leaves. The leaves, in a perfect state, should be used.

*Recipe:* Leaves of Digitalis, ten grains.  
Blue Mass, twenty grains.

Form ten pills. One may be taken, three times a day, till the pulse strikes only fifty or sixty beats in a minute. In all cases where the hemorrhage is protracted, and the discharge is likely to prove dangerous, a large blister plaster should be applied over the breast. The German physicians have used the *hyoscyamus* in hemoptysis, with good effect. The dose is half a grain, three times a day, in the form of a pill. After the bleeding is stopped, we should use every means to prevent its return. If it has arisen from a predisposition to hemorrhage, and an inflammatory disposition of the system prevails, it may be necessary to use small bleedings from the arm, and small blisters over any part of the chest where soreness is located. The bowels should be kept open with some gentle medicine, such as *castor-oil*, *rhubarb*, *salts*, *senna tea*, or some of the gentle vegetable pills. A very safe and useful purgative in this disease is:

*Recipe:* Epsom Salts, one ounce.  
Table Salt, half ounce.

Mix them well. A tea spoonful of this may be taken in a full glass of water, before breakfast, dinner and supper, or as often as necessary, to keep the bowels open. At the same time, the diet should be light and cooling, mostly vegetable, with milk and bread, mush, rice, barley. All vigorous exertion, either of body or mind, should be avoided. Sailing on the ocean will be

beneficial; swinging, riding in an easy carriage, or on an easy travelling horse. If the patient is very weakly and delicate, some gentle tonic should be given; and perhaps nothing will be better than the following pill:

*Recipe:* Copperas, burnt and ground, twenty grains.  
Salts Tartar, twenty grains.  
A small quantity of Flour.

Mix, and form twenty pills. One may be taken before breakfast, dinner and supper; or the following may be taken in their place:

*Recipe:* Citrate of Iron, one drachm.  
Water, one ounce.

Dissolve the iron in the water. A tea spoonful may be taken three times a day; or the following may be taken:

*Recipe:* Citrated Aromatic Wine of Iron, two ounces.

A tea spoonful may be taken three times a day. But if a chilly feeling come on at any time in the day or night, and return again, the following medicine will be better:

*Recipe:* Salicine, forty grains.  
Water, two ounces.

Dissolve the salicine in the water. A tea spoonful may be taken, once in four hours, in sweetened water. Where the lungs are likely to be involved by the spitting of blood, a seton should be introduced in the breast, over the sore part; this should be kept running for some time, and then removed, one thread at a time. An issue of some kind is necessary, and if the seton is objected to, the tartar emetic ointment should be used. (See *Materia Medica* for directions how to make it.) It should be worn for several days, till pustules are freely raised; or the following ointment may be used:

*Recipe:* Tartar Emetic, forty grains.  
Hog's Lard, half ounce.

Mix them well, and apply a portion every day, by rubbing it in with the fingers, till the pustules are raised thick and full. When the pustules are full, they should be opened and dressed with simple cerate.



## VOMITING OF BLOOD, OR HEMATAMESIS.

A BLEEDING from the stomach may be distinguished from that of the lungs by its being usually preceded by a sense of weight, pain, or anxiety, in the region of the stomach. It is not accompanied by a cough, and the blood is discharged in considerable quantities. It is of a dark color, and somewhat grumous. It, at first, is mixed with the contents of the stomach.

This disease is caused by anything that will stimulate the stomach very highly, as blows, bruises, or wounds on this organ; in fact, anything that is calculated to cause too great a determination of blood to that organ. There are cases on record where a leech has been swallowed, and the bite caused profuse hemorrhage from the stomach. — *Goode*. It is frequently a symptom of some other disease; as a suppression of the menses, or of bleeding piles, or obstructions in the liver, spleen, and other viscera, or towards the close of malignant scarlet or typhus fever, and other forms of malignant disease where putrid symptoms of a high degree prevail. This species of hemorrhage is seldom so profuse as to destroy the patient immediately. *Dr. Thomas* says: "The principal danger seems to arise from the great debility which repeated attacks bring on, or from the lodgment of blood in the bowels, which may become putrid, and bring on some other disease."

## TREATMENT.

When hemorrhage takes place from the stomach, in healthy, robust persons, in consequence of suppressed menses or bleeding piles, if the pulse is full and strong, bleeding from the arm will be admissible. If the hemorrhage is induced by a suppression of the menses, in order to prevent a recurrence of it, the means prescribed under that head should be used. See chapter on *Suppressed Menses*. If the bleeding is profuse, active astringents must be used:

*Recipe*: Gum Kino, ten grains.  
Sugar of Lead, five grains.  
Opium, one grain.

Make all fine, and give for a dose. This may be repeated every half hour, or hour, according to the urgency of the case; or a tea spoonful of alum may be dissolved in a gill of very cold water, and drank. This may be repeated every half hour, till

the hemorrhage ceases; or the *sugar of lead* and *opium* may be given, as prescribed for bleeding from the lungs. *Dr. Thomas* says he has seen the happiest effects from the use of the *muricated tincture of iron*. Thirty drops may be taken in a little water, and repeated every hour, till the bleeding stops. *Dr. Hamilton* says, he "has seen many cases of active hemorrhage from the stomach in healthy females, where every other course of treatment failed, readily yield to active purging." In all such cases, the bowels should be kept open with gentle purgatives such as *castor-oil*, *Epsom salts*, *senna tea*, &c. The drink should be cool, and pleasantly acidulated with lemon acid, or vinegar. The diet should be light, thin, and nourishing. The exercise should be moderate, and gentle. The surface of the body should be kept comfortably warm, especially the feet. The mind should be kept tranquil.

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### APOPLEXY.

THERE are two species of apoplexy; one is characterized by a hard, full pulse, flushed countenance, and sterterous breathing; the other, by a feeble pulse and pale countenance.

In the first species, the fit generally comes on suddenly, without warning; though a dull pain in the head, accompanied with a sense of weight, heaviness, or sleepiness, and vertigo, usually precedes the attack. The respirations are deeper than natural; the face and eyes are red and turgid. On the attack of the paroxysm, the person falls to the ground, generally convulsed for a time, then passes into a profound stupor, from which he cannot be aroused. The breathing is greatly oppressed—slow, but regular; but in some cases it increases in frequency, weakness, and irregularity, with the progress of the fit, till at length it becomes intermittent, and convulsive. The convulsions are sometimes so hard that the patient cannot be held still by all the persons that can get hold of him. It is in this form of the disease that we meet with the sterterous, or snoring, breathing. The sterterous breathing depends upon the condition of the windpipe, larynx, and fauces; they being in the same condition of those of the head, a larger portion of mucus is secreted by the exhalents than can be taken up by the absorbents; in consequence of which, it accumulates, and prevents a free flux and reflux of air in respiration; and hence a sterter, though not a

symptom of apoplexy, as a species, may be ranked as a pathognomonic character of the species before us. *Drs. Cooke* and *Boerhaave* measure the strength of the attack by the degree of stertor; and *Dr. Portal* agrees with them in opinion. In such a case, the breast heaves, and the eyes are glassy and the pupils are enlarged. In the beginning of the fit, the breathing is slow, laborious, and stertorous; and, in those cases that prove fatal, these symptoms remain to the end. There is not unfrequently a collection of froth or foam in the mouth, which is blown away from the lips with considerable force. The skin is about the ordinary temperature, and covered with a copious perspiration, or a clammy sweat. The pulse is full and hard, and the face is flushed; the eyes are bloodshot and prominent, and generally closed; the cornea, or black of the eye, is glassy and dull, and the pupil, for the most part, dilated; there is a spastic action of the muscles of the face, and this action extends to the limbs, and sometimes with great force; the teeth are frequently clenched; the pupil of the eye, in some cases, instead of being enlarged is contracted till it is not larger than a pin's head. This is a dangerous symptom. The paroxysm varies in duration from eight to eight-and-forty hours, and sometimes exceeds this period. *Dr. Cooke*, of Europe, relates a case of a woman, who lay three days, and then recovered. Where apoplexy does not prove fatal, it is apt to return on the patient, or terminate in palsy, more or less general; mostly, however, on one side, in the form of hemiplegy, in the opposite side of the body from that of the brain affected. This proves that the nerves have their origin in the opposite side of the brain to that of the body which they supply. It is rarely that some of the blood-vessels of the brain are not ruptured in this form of apoplexy, and consequently produce an effusion of blood in some parts of the brain. The rupture is most apt to take place in the medullary substance of the brain, near the lateral ventricles, and a portion of the extravasated blood will often escape into these cavities.

#### THE SECOND SPECIES OF APOPLEXY.

Is the disease of a constitution infirm by nature, or enfeebled by age, intemperance, or over exertion of body or mind. It is more of a purely nervous character than the preceding variety, and more the result of vascular debility, and of vascular surcharge, and consequently, where effusion of blood is found, as it often

is, in the present variety, the vessels have been ruptured, not from habitual distension, but from slight causes that have produced a sudden determination of blood to the head, beyond which the blood-vessels are incapable of sustaining themselves; hence, a sudden fit of coughing or vomiting, a sudden fright or fit of joy, or an immoderate fit of laughter, or a jar occasioned by a stumble in walking, or a severe jolt, in riding, have brought on the present form of apoplexy; and with so much the more danger, as the system possesses less of a remedial or rallying power in itself. In most of these cases, the effusion detected after death has been as purely sanguineous as in the first-described species. Old persons are most liable to this form of the disease. It is not always the case that effusions of blood are found in the brain in apoplexy from debility; but large quantities of serum are sometimes found. *Drs. Portal and Abercromby* deny that serum is ever effused so as to produce apoplexy. But to rebut this, *Boerhaave, Hoffman, Mead, Savages*, and *Cullen*, all say it can; and they cannot be cast off without more proof on the subject. Serous apoplexy, strictly so called, is the result of a debilitated constitution, and especially of debility existing in the excretant vessels of the brain, whether exhalants or absorbents. The extremities in the vessels of the brain, probably perform the office of absorbents. In these cases, a serous effusion, under these circumstances, may take place. From these causes, we frequently meet with apoplexy as the result of general dropsy. This variety of apoplexy rarely makes its attack so suddenly as the other variety. It is commonly preceded by forewarning symptoms, as vertigo, headache, imaginary sounds in the ears, faltering in the speech, a failure in the memory, and at length a sense of drowsiness, and a tendency to spasms. But when the attacks come on, the patient is as completely prostrated as in the other variety, though the symptoms are less violent, but not on this account less alarming, in consequence of the greater debility of the system. The countenance is here pale, or sallow, instead of being flushed; the pulse is weak and yielding, and sometimes scarcely perceptible; and the breathing is always heavy and laborious, but not always stertorous. If spasms occur, they are uniformly of the convulsive kind. The duration of the fit varies as in the preceding variety; and if the patient recovers, he is more liable to a relapse. There is greater danger of palsy after an attack of this variety than the former.



From these remarks on the two varieties of apoplexy, we may readily see why this complaint and its ordinary associate, palsy, should be about equally common to the poor and the rich; for frequent exposure to cold and wet, severe and long protracted exercise, and a poor diet, will be often found to produce the same debilitating effects as ease, indolence, luxury, the indulgence in too sumptuous a table, and potations of wine and strong spirits. And hence, contrary to what many would expect, *Sir Gilbert Blane* has observed, from accurate tables, kept with minute attention, and derived from a practice of ten years in St. Thomas' Hospital, in Europe, and his private consultation, that "there is a considerably greater proportion of apoplexies and palsies among the former than among the latter." That is, these diseases bear a greater proportion among the poor than among the rich, compared with other diseases. But cases of palsy of one side occur in both classes; in the poor, among the hard-laboring classes, and in the rich, among those who debilitate their systems by voluptuous and exhausting pleasures. In forming your opinion as to the probability of recovery, a special regard must be had to the peculiar character of the disease, the habits and the life of the patient, &c. Generally speaking, apoplexy in sanguine persons is not so dangerous as it is in weakened and debilitated persons; for in the latter, we have not so much to work upon, and the constitution has less power to resist it, and to assist us in the cure. As to the rest, in either modification, the degree of danger will be generally measured by the violence of the symptoms. If the spasms are severe, and the pupil of the eye is much contracted, the patient will be almost sure to die. But if the pupil of the eye be very large, though the spasms be very severe, yet we have more hope of a recovery.

#### TREATMENT.

If we are consulted during the existence of the precursory signs, as noticed above as taking place, we shall often find it in our power to ward off a paroxysm by bleeding and purgatives, and the injunction of perfect quietude and a low diet. Any active purgative in a strong constitution will be proper; but in weak constitutions, the purgative must be more mild. If the patient is much debilitated, it would be better to bleed by leeches or cupping-glasses, applied to the back of the neck or under the mastoid process, than to bleed at the arm. Sometimes purga-



tives alone will ward off the attack. Yet if there should be much drowsiness, vertigo, swimming in the head, with a dull pain, bleeding will be indispensable; for, in persons subject to this disease, such symptoms will assuredly lead to a fit, if not timely subdued. When the fit has taken place before any remedies have been used, which is almost always the case, the patient, if possible, should be immediately carried into a large, airy room; everything about the neck, and, indeed, about the body, should be loosened, and free air admitted to him. He should be placed in a posture that least favors a determination of blood to the head; the legs and feet, if possible, should be placed in warm water, and stimulating applications be made to them, if he can be kept still enough to have them applied. These remedies are equally applicable to both forms of the disease.

The other remedies to be used must be adapted to the variety of the disease. They will be more easily understood if we give them separately.

*For the first variety, or sanguine apoplexy.* Bleeding is our sheet-anchor; without it, we cannot expect a cure, notwithstanding the opinions of some ancients and moderns to the contrary. All correct observation and experience prove them to be wrong; for in those cases where copious bleeding has spontaneously taken place, from the nose, lungs, or hemorrhoidal vessels, recovery has frequently taken place. We have not only the sanction of all Arabia, as well as Europe generally, but America, for free bleeding in strong apoplexy. It has been made a question, from which arm the blood should be taken. I have not been particular about that circumstance. The great object is to reduce the general quantum of the blood; therefore it should run till decided constitutional effects have been produced. I have taken from strong, athletic men, who were full of blood, at least three quarts. Indeed, a small bleeding will do more harm than good; for it only causes the arteries to contract upon themselves, and thereby increase the engorgement in the brain. Therefore, bleed till the fit ceases, let the quantity be much or little; and if symptoms of a returning fit come on, bleed again, either from the arm or by twenty or thirty leeches applied all around the back of the neck and head, at the edge of the hair, from ear to ear. In support of this practice, as well as my own experience, I might cite Sydenham, Wopfer, Boerhaave, Van Sweeten, Morgagni, Baglivi, Savages, Tissot, Mead, Friend, Pitcrain, Hoffman, Cullen, Portal, Cheyne, Cooke, Goode, and many others. The great object of

bleeding is to bring the whole system under its influence, and to afford time for an absorption of whatever fluid or blood may have been effused. If leeches cannot be conveniently obtained, cups should be freely applied on deep scarifications on the back of the neck.

The next important means to be used is to open the bowels by an active enema; then follow it by an active cathartic. For the first dose, if the patient is stout and strong, give him

*Recipe:* Calomel, thirty grains.  
Jalap, forty grains.

Mix in sirup. Give it all for a dose. In three hours, follow this with a large dose of *castor-oil*, or a pint of strong senna tea with an ounce of Epsom salts dissolved in it. Elicit this, in two hours, by an injection of salt and warm water. Cold water or ice should be kept constantly applied to the head; pouring the water on is better than wet cloths; or bladders filled with ice may be kept on the head. The bowels should be kept open after the first free evacuation by

*Recipe:* Calomel, twenty grains.  
Aloes, twenty grains.  
Extract Colocynth, twenty grains.

Form ten pills. Give three every four or six hours, so as to act from three to five times in the twenty-four hours. If the gums become a little sore, the cure will be the more certain. The patient should live on gruel, rice-water, or tea, and a little bread soaked in it; his drink may be cold water. The pills may be occasionally changed for *castor-oil*, *senna tea*, or *Epsom salts*.

*Treatment of the second variety.* Here our treatment must differ in many respects from that used in the first variety, or sanguine apoplexy; but even in this form of the disease, the lancet is often found necessary, though smaller bleedings will be sufficient. Cupping or leeching, however, in these cases, will generally be preferable to the lancet. In this way, we may succeed in taking a sufficiency of blood; without it, we have but little hope of success. After the blood has been taken from the back of the neck and from the temples, dry cupping between the shoulders has been used with good effect. In this form of the disease we must use purgatives, but not in such large doses. The following formulary will be found proper:

*Recipe:* Calomel, forty grains.  
Rhubarb, twenty grains.

Form twenty pills. Six may be given at first, and one every hour after, till free purging is produced. Injections should be used to meet them. The pills may be continued, from day to day, till the patient spits freely. This will ensure better success than any other practice. Some persons say they had rather die than be salivated;—in this case they have a fair opportunity to test their faith, for, without a salivation, nine in ten will die. In this form of the disease, blisters should be applied to the wrists and ankles, and the head should be shaved, and a cap made of a blister plaster. If the patient is likely to sink, from debility, some mild stimulants should be given, such as the salts of harts-horn, in three or four grain doses, mixed in sugar, and a few drops of water, or a tea made of sweet marjoram, peppermint, or a few drops of the spirits of lavender, or the sweet spirits of nitre, may be given. It should be kept in mind, that a person once attacked with apoplexy is always liable to a return of it, and should be very cautious in his diet and drink; his body and mind should be kept tranquil, and his stomach never should be loaded. He should keep his bowels open, and if he has had an attack from debility, he should take some tonic; the preparations of iron are the best.

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## HEADACHE.

### STUPID HEADACHE.

THERE are so many species of headache, all of them differing a little in their symptoms and remedies, that it is somewhat difficult to describe every species precisely, without confounding the symptoms more or less. And the remote causes of headache are so numerous and so complicated, that it is difficult to arrange them satisfactorily. Many of the remote causes are so completely concealed from view, by being confined to the brain itself, that we labor in vain to discover and analyze them.

Suppressed bleeding piles, repelled or retarded menstruation, or the drying up suddenly of a sore that has discharged a long time, are very frequent causes of some species of headache. A sluggish state of the bowels is another fruitful source of headache. Whatever retards the current of blood in the sinuses of the head, will produce headache. Of this kind are various tumors, particularly of the conglobate glands; polypus; bony fragments

separated by some violence from the internal table of the skull, which perhaps have not produced irritation till the occurrence has so long transpired that it has been forgotten; hence, some part of the brain, on dissection, has been found in a state of supuration. In some cases, the disease has been cured by a discharge of pus from the eyes, nose or ears. It has often been produced by a decayed tooth, and has ceased on its removal; a profusion of hair will produce headache,—then it yields to clipping it close, or thinning it out. It has often followed on a neglected catarrh, or neglected rheumatism; and, still oftener, has resulted from some morbid irritation in the stomach, and especially from worms. Again, whatever prevents a free evacuation of the right auricle and ventricle of the heart, and contributes to retard a free circulation of the blood in the veins which discharge their contents on this side of the heart, has a tendency to lay a foundation for this complaint.

From what has been said, it will be readily perceived that it is frequently very difficult to determine what is truly the cause of headache, and whether it be the true original disease, or a symptom of some other. *Dr. Cullin* regards it as a symptom in every instance, and not without some plausibility. But *Dr. Goode* says, "This is to suppose that the brain, which, from its magnitude and complexity, seems to open a theatre for more intrinsic disquietude than all other organs whatever, is exempt beyond any of them."

The species immediately before us, especially distinguished by the name stupid headache, when original, seems to be strictly a nervous affection of the brain, originating from nervous debility, or exhaustion; or, in other words, for a want of a sufficient supply of sensorial fluid, on which the organic feeling of comfort and refreshment depends. It is hence peculiarly marked by disquiet and confusion, rather than by acute pain, which disqualifies a person laboring under it for a continuance of mental labor, and in which the sight is dim, the hearing dull, and the memory vacant.

Hard students are frequently the subjects of this species of headache; those who have set up all night in pursuit of some abstruse and difficult subject, or who have labored upon the same from week to week, with too small allowance of time for sleep or exercise. In such cases, it may be relieved by surrounding the temples with a towel wet in cold water, which gives energy to the enfeebled brain. Sudden and unexpected



grief will produce this species of headache, during which the sufferer is incapable of sleeping, or thinking, or attending to any kind of business. In fact, whatever has a tendency to produce debility of the brain, will produce this species of headache; as a profuse diarrhœa, repeated and immoderate bleeding, and particularly any sudden faintness or debility of the stomach. This last cause acts in a double way: first, by withholding the necessary nourishment from the brain; and, secondly, by the close and direct sympathy that exists between the brain and stomach. Hence, when we meet with this species of headache, and are doubtful to what it is to be referred, we shall, by acting on the stomach, generally relieve it. But, as we have several species of headache to treat of, and the remedies are quite similar, for all that are remediable by medicine, we shall refer you to the treatment summed up at the close of the entire description of headaches.

#### CHRONIC HEADACHE.

Perhaps this species of headache is always dependent upon some local irritation, and may be produced by many causes. Probably most of the irritants noticed at the opening of the preceding species will be found to be the cause of this species; and when this is the case, we need not expect to cure it, for palliatives are all that can be used;—the disease will only cease with life itself. It often, however, proceeds from chronic rheumatism, and that has a tendency to intermit. This form of headache will be often found to intermit. This species may be distinguished by being rather limited to some particular part of the head; by its remissions or intermissions; by the acuteness of the pain on the return of the paroxysm; by an intolerance of all motion of the head, far more than of light or sound, both of which are, however, sometimes very irksome; and by a peculiar feeling of contraction of the brain, as if it was cramped in something very tight. But this last symptom rarely takes place till the disease has been established for some time, and would seem to indicate a thickening of some of the membranes of the brain, from increased action and a long course of irritation; a result which has been frequently discovered on dissection. When the headache is completely rheumatic, the pain ceases as soon as the rheumatism attacks some other part of the body, for the action becomes transferred. There are, however, intervals of pain, when the cause is not rheumatic, but proceeds from some irri-



tating cause in the brain itself, as a tumor in the penial gland, or a spike of bone growing down into the brain, or an aneurism of the carotid artery, which has been discovered on dissection. *Sir Gilbert Blane* particularly describes this aneurism; he saw two cases of this description made manifest by dissection. A caries of the bone in some of the sutures will produce this form of headache, as I have witnessed within the last four years, in a lady. The caries appeared to be absorbed after some months, and she recovered.

We now proceed to the third species of headache.

#### MEGRIMS.

Generally speaking, this is a disease of far less importance than the two preceding species. It seems to be seated chiefly in the external integuments of the head, and its principal symptoms are a tenderness on pressure, a slight redness of the skin, and a suffusion of the eyes, and with this there is frequently nausea and sickness at the stomach; but whether this is a cause or a consequence of the disease, it is not always easy to determine. Indeed, it is most probable that in some instances it is the cause, and in others the effect of the disease.

Persons in delicate health are most subject to megrims. They are generally of a relaxed habit and irritable temperament, and are apt to be dyspeptic, and hypochondriacal. In such persons, all the causes of catarrh and rheumatism are sufficient for this purpose, or anything else that will disturb the balance of circulation; hence, it is often the result of cold feet, or the chill that follows a badly digested dinner. The megrims often assumes a periodical character, in which case the pain mostly fixes itself in the same side of the head. In some cases, it is limited to a small spot, with little or no affection of the brain; but in other cases, it strikes deeply into the head, and reaches down towards the eyes. The eye then cannot endure the least glimmer of light. In many instances, the paroxysms are perfectly regular, returning at noon; but more commonly the attacks are produced by some incidental circumstance, and then the paroxysms are not regular; yet it is more frequently found in the afternoon than in the morning. It is then more apt to occur soon after the digestion of the dinner. Sometimes, when it returns in the evening, it continues through the whole night, and the ensuing day, and subsides towards night—the paroxysm lasting about twenty-

four hours. In some very active and robust men, otherwise healthy, it will commence in the morning and last about six hours, and go off, and not return perhaps for six weeks.

The fourth species of headache is the

#### THROBBING HEADACHE.

Sometimes there is some particular artery, or some portion of an artery, that will not beat in regular time with the heart, and the rest of the arterial system. This anomaly for the most part, depends upon a peculiar nervous irritability of the muscular fibres of the arteries, and is mostly limited to that portion of the artery in which the palpitation occurs; but it may possibly take place in the whole arterial system. When any of the preceding species are grafted on a constitution of this kind, or where one or both of the temporal arteries are of this tendency, or are disposed to run into this anomalous contraction or relaxation, we shall have an instance of the species before us, which commonly originates in this manner. Although it sometimes occurs that the morbid beat of the artery is in accordance with the action of the heart, it is no less a spasmodic action on that account. This species of headache is, therefore, to be considered as of a more compound character than the rest, in consequence of the peculiarity of the constitution in which it occurs, with the exception of which, its causes and history, as we shall show presently and its mode of treatment, do not materially differ from those of the other species.

#### SICK HEADACHE.

As the last species consists of almost any of the preceding, operating upon a constitution peculiarly predisposed to irregular arterial action, the present consists of the same, operating upon a constitution peculiarly predisposed to irregular action of the alimentary canal. In its general symptoms, it is nearly allied to the stupid headache, and the migrains, but mostly to the latter. Sick headache usually shows itself in the morning; but it may vary its hour as well as its length of intermission.

The patient awakes in the morning with a pain that rarely affects the whole head, but only some particular part of it,—most frequently the forehead, extending over one or both of the eyes. Sometimes it is fixed near the top of the head, a little to one side; sometimes the back part of the head is the seat of the

pain. In other cases, it darts from one place to another, and varies in its degree of intensity. The person generally has some nausea, and occasionally vomiting. If the vomiting commences in the morning before breakfast, phlegm is mostly thrown up, unless the straining be very hard; then bile may be mixed with it. After this, the pain soon begins to abate, leaving a soreness about the head, a squeamishness about the stomach, and a general feeling that causes the person to wish for repose. Perhaps, after a short sleep, he recovers perfectly, only a little weakened by his suffering. The duration of this species of headache differs in different persons. In some, it will subside in two or three hours; in others, it will last twenty-four hours, or longer, and with a violence scarcely to be endured—the least light or noise rendering the pain intolerable. In young persons, the paroxysm goes off soon; but the longer a person is subject to it, the longer the paroxysms will last; and the system becomes extremely debilitated. Its returns are very irregular; some persons suffer from it every two or three days, some every two or three weeks, and others have longer intervals. Those who take but little exercise, and are inattentive to their diet, suffer most severely. Costiveness, when habitual, is a frequent predisposing cause, and hence a protracted laxity of the bowels is frequently the only cure of the disease.

#### TREATMENT OF ALL THE SPECIES.

The connection of all these species of headache is so close, and several of them so apt to run into another, that we have reserved what we have to say on the treatment till we had fully described them all, as we wished to have an opportunity to conclude how far anything like a common plan of treatment would be advantageous, and upon what points they should vary. A very slight recurrence to the history of each species will show, that the causes of headache are local irritation, suddenly checked perspiration, or exposure to cold and damp; a peculiar irritability of the nervous system, and a peculiar condition or idiosyncrasy of the temporal arteries, and a morbid condition of the stomach, liver, and bowels. The last is, perhaps, the most common cause; and hence, where there is any doubt as to the specific cause or character of the disease, we cannot do better than to treat it as chiefly appertaining to the fifth species, and implicated with the stomach and its coëacting organs. It is or

this account that an emetic, followed by an anodyne, will, in most cases, cure the disease in a few hours. Therefore, in the commencement of the attack, if it be in the morning, an emetic should be given :

*Recipe :* Ipecac., twenty grains.  
Tartar Emetic, three grains.

Mix, and give it in the usual way. When the operation is over, an anodyne should be given :

*Recipe :* Opium, one grain.  
Camphor, two grains.  
Tartar Emetic, half a grain.

Form a pill, which should be taken, and the patient left to rest and repose for two hours; after which, a cup of strong coffee, or tea, may be taken. But if the attack comes on at night, or in the evening, the following pill should be taken, and the patient should go to bed :

*Recipe :* Scammony, twenty grains.  
Cape Aloes, twenty grains.  
Pulv. Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Jamaica Ginger, ten grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Three or four of these should be taken at bedtime. They will operate once or twice in the morning, after which the patient will be able to take a light breakfast, and then attend to business. The author has been subject to sick headache for thirty years, and in no case has he failed to obtain relief, in an hour or two, when these pills have been taken in time; that is, before the pain has continued more than two or three hours. When the pain has continued for ten or twelve hours, it requires six or eight pills to operate. The pain will subside long before the pills operate. If due care be taken to take these pills as soon as the patient finds himself costive, he never will have sick headache. If he is troubled with piles, the above pills will greatly relieve them, and in many instances will cure them entirely. Where the disease is complicated with rheumatism, some sudorific and anodyne should be combined with the purgative; such as a Dover's powder, six or eight grains, given with the purgative. This treatment will generally relieve the pulsatory headache, or the megrims, though in those forms of headache we may sometimes use the following to more advantage :

*Recipe :* Extract of Belladonna, one grain.  
Extract of Liquorice, four grains.

Mix, and divide into four pills. One of these pills may be taken every half hour, till the pain is relieved. This medicine will enlarge the pupil of the eye, but that will soon return to its proper size. Or the following mixture may be used :

*Recipe* : Spirits Camphor, half an ounce.  
Tincture of Valerian, half an ounce.  
Spirits of Ammonia, half an ounce.

Mix them, and give thirty drops every half hour, in a little water, till relief is obtained. But if you are sure the system is disposed to rheumatism, or if it has been affected by rheumatism, then you may give the *wine of colchicum*, fifty drops, three times a day, for a few days, till free purging is produced. Snuffing black pepper, when the brain is debilitated, will give relief, for a time; or the strong acetate of ammonia, applied by wetting a cloth and binding it to the temples, will give relief; or cloths saturated with cold salt water, applied to the head. In all cases, the hair should be kept short and thin upon the head. Dr. Parr, however, thinks differently, and advises that the hair should be allowed to grow. But we must recollect, that in his day and country it was fashionable to shave the head and wear a wig: he let his hair grow, and wore no wig, and his headache left him. Is it not plain that the head without a wig is cooler than with it? And is it not equally plain that short hair leaves the head cooler than long hair? If the relief was obtained by keeping the head cool, then I am still right—keep the hair short.

In the intervals of the attacks, in chronic cases, the nitrate of silver is recommended by *Dr. Goode*; half a grain should be taken, three times a day, in the form of a pill. Blisters have been used to the back of the neck, and even moxa, or cotton, has been burnt on the painful part, where the pain has continued for years. By this remedy a cure has been obtained. Early rising, the shower-bath, and active exercise afterwards, and keeping the bowels open, will generally effect a permanent cure. It is said that *Linnaeus* cured himself of the megrims, by taking a hearty draught of cold water every morning, and then walking himself into a perspiration.

But we have yet another form of headache, which the above remedies, though palliatives, will not cure, and that is the *chronic headache*. Here the disease is often produced by a thickening of the membranes of the brain, or by a node or spike of bone on the inside of the skull. In these cases, leeching over



the painful part, and brisk purgatives are required; and in some cases, a salivation, properly conducted, is proper and necessary; but when all other measures have failed, and the point is clearly defined, the trephine may offer a chance for the patient yet to live. I need not say that an experienced surgeon will be required to perform this operation. By this means, if pus be collected, it will escape, or a spike of bone may be removed, or a thick portion of the skull be taken away. Cures have been performed in this way. If the disease be the sequel of gout, rheumatism, or syphilis, the remedies for those diseases must be used. It has been a long time a custom to take twenty drops of laudanum, in a cup of strong coffee, for the headache, and with a good effect; and although the patient does not sleep, he will be relieved for that time. In all cases, the bowels should be kept open, and a strict observance in diet should be attended to. I have frequently relieved headache from debility of the brain by quinine, or salicine, one grain every hour, for ten hours; or by the following:

*Recipe:* Aloes, Socot., thirty grains.  
Sulph. Quinine, ten grains.  
Tartar Emetic, one grain.  
Opium, one grain.

Form ten pills. Give one every hour, till all are taken. Early rising, and the cold bath, and active exercise immediately after it, so as to produce perspiration, will, in most cases, perform a permanent cure.

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## TOOTHACHE.

It may seem unnecessary that we should undertake to describe the toothache, as every one who has experienced it thinks he knows so well what it is. That they certainly know that they have a pain in or about the tooth, no one will dispute; but that the tooth is really the seat of the pain, is very doubtful in many cases. Every tooth has an internal cavity, which commences at the point of its fang or root, and enlarges as it ascends into its body. This cavity is not cellular or rugged, but smooth on its surface; it contains no marrow, but appears to be filled with blood-vessels, a membrane, and nerve. In the interior of this cavity the teeth are peculiarly sensitive, and hence, direct or indirect exposure to the external air, (either through a caries, or

indeed in some instances it appears to act through the body of the tooth,) will produce acute pain, and is in part the cause of toothache. The pain thus produced will sometimes cease suddenly, especially upon the application of an opiate, or some acrid essential oil; but the irritation is often communicated to the periosteum of the tooth, and from thence to the membrane that lines the socket of the tooth, which is only a duplicature of the true membrane; and hence, the pain will often become permanent, from the inflammation excited in this membrane, now thickened and tense, and at the same time incapable of relieving itself by stretching; and if a rheumatic or gouty disposition of the system prevail, the pain will become intermittent or periodical. In all these cases, wherever we can trace a hole or slit in the tooth, the most effectual way to cure the pain and save the tooth is, to plug it with fine gold; which, if well done, will not only relieve the pain, but save the tooth for years, and perhaps for the remainder of life. Where this cannot be done, the nerve may, as there is a sufficient opening, be destroyed by caustics, introduced through the hole of the tooth, so as to come in contact with the nerve; or the pain may be diminished by the application of *opium*, in substance, or by wetting a piece of cotton with *laudanum*, and filling the tooth, or by using the oil of *cajeput*, *cinnamon*, *cloves*, or *creosote*, in like manner. Indian turnip or smartwort, held in the mouth, will sometimes ease the toothache, especially if the pain is of a rheumatic character. Spirits of camphor, or spirits, held in the mouth, will have a similar effect. Sometimes warm water, and sometimes cold water, will give relief. Tobacco is of the same class of remedies. A little of the oil of ambeer, taken from the stem of a pipe, if carefully applied to the nerve, will always give relief; but it should not be swallowed, especially by those who are not in the habit of using tobacco. Electricity has been tried, with good effect, in some cases. A small piece of India rubber may be pressed into the cavity, and then melted with the end of a knitting needle made red-hot, which will effectually fill the cavity and exclude the air, so giving entire relief as long as it lasts. Animal magnetism was, at one time, in Europe, used with considerable effect for toothache, as well as other nervous pains; "and," says *Dr. Goode*, "if we may credit the writers of a century or a century and a half ago, with instant and specific effect. The grand magnetizer of that day was the then celebrated *Valentine Greatrake*, who operated by stroking his hands over

the part affected; much in the same manner that *Mr. Perkins* of America, did his metallic tractors." We would add, that we have witnessed this operation for toothache, as well as other pains, and seen speedy relief given.

The proper mode of applying animal magnetism for the toothache, is as follows: wet the palm of one hand with spirits of camphor, or strong Cologne, or other spirits, and place it on the side of the face which is not affected, immediately opposite the painful tooth; then, with the other hand, make quick, light, and rapid friction over the painful tooth, drawing the hand quickly from the angle of the jaw to the chin, making the pass only one way, and in from five to ten minutes, the pain will generally be entirely removed. If the pain be in an upper tooth, the friction should be made from the top of the cheek downwards.

When all other remedies fail, and the tooth cannot be saved, then it should be carefully extracted. A tooth, however, never should be extracted till all other means have been tried, unless where much decay exists between the teeth, which will be likely to destroy the contiguous tooth; then, in order to save one, the other should be extracted immediately. Sometimes the torn arteries bleed profusely after extracting a tooth. To remove this, some strong styptics should be applied, such as the sulphate of copper, (blue vitriol,) or burnt alum, or caustic, or the tincture of catachu, or kino.

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## MORBID HICCOUGH.

IN morbid hiccough, the spasmodic action exists chiefly in the diaphragm or skirts, but the principal seat of the disease may be the stomach, liver, or nervous system. *Hippocrates*, a long time ago, declared the principal seat of this disease "is the stomach;" and *Hoffman*, in later times, corroborated his opinion. Debility is, perhaps, the ordinary remote cause, and irritability, or some occasional stimulus, the exciting cause. Thus, an excess of food, especially in a weak stomach, is often a sufficient stimulus; and hence the frequency of this complaint among infants, and very old persons, from worms, acidity, or bile in the stomach. External pressure on the stomach is another exciting cause, as a curvature of one or more ribs, or the point of the breast bone, may produce it. The stomach is, however, not the only organ in which the morbid cause which produces hiccough is seated

The liver is frequently the seat of the disease. *Dr. Percival* says, he has frequently found an enlargement or inflammation of the liver to be the cause of morbid hiccough. When this is the case, the inflammation is seated on the upper surface of the liver, where the diaphragm is immediately contiguous to it.

Hiccough often follows upon strangulated hernia, and, according to *Mr. John Hunter*, "in numerous instances accompanies local irritation, after operations of various kinds." It has sometimes attended the passage of a stone in one of the ureters, and has continued through its entire course.—*Darwin*. Where the exciting cause is in the stomach, the spasmodic action generally removes it by vomiting. If not, a draught of cold water will frequently relieve it, or a few drops of the spirits of camphor in water, or, which is better, the essence of camphor, or a dose of the volatile spirits of hartshorn, as well as the tincture of musk, or asafoetida. Sometimes, holding the breath, and producing a voluntary spasm, of a rigid and revulsive kind, will give relief; strong errhines, as snuff, or varatria, will produce this effect; if the varatria, very minute portions should be taken—generally, smelling the bottle, with the cork out, will be sufficient. A sudden fright, or other strong emotions of the mind, will relieve it. If these remedies fail, we must use opium in large doses, or apply a blister plaster over the stomach. If the hiccough is produced by inflammation of the liver, the remedies must be addressed to that organ; first by bleeding, even to fainting, then give a brisk purgative of calomel and jalap, following it with opium and tartar emetic—two grains of the former, and four of the latter. Mix, and divide into four powders. One should be given every hour; warm tea should be freely taken, to promote perspiration. A blister applied over the region of the liver, and a low diet will be beneficial. In some cases, an emetic will be proper, and when there is much acid in the stomach, the super carbonate of soda will give relief—a tea spoonful dissolved in a glass of cold water, and repeated if necessary.



## SNEEZING.

SNEEZING is a convulsive motion of the respiratory muscles, commonly excited into action by some irritant applied to the inner membrane of the nose, in the course of which the air from the lungs is forced out, and the lower jaw is forced forward at the same time. It is a common, but rarely a dangerous affection; although it occasionally becomes troublesome and sometimes dangerous. Some of the German Miscellanies give instances of its having been both permanent and violent, and sometimes periodical; and, in a few cases, of its having proved fatal. There is one case related, where the sneezing, in one paroxysm, continued three hundred times, without intermission. The ordinary causes are, irritants applied to the inner membrane of the nose, a sharp, pungent atmosphere, hardened mucus, the acrimonious fluid secreted in catarrh or measles, or a morbid sensibility of the membrane of the nose itself; but the severest cases have been produced by sympathy with some other organ, as an irritable state of the lungs, stomach or bowels. For the same reason, sneezing often accompanies pregnancy. It may accompany injuries of the head, and sometimes the last stage of low fevers. It is said by some to be the sequel of repelled itch. As sneezing is a symptom of catarrh, it will sometimes call into action all the symptoms of a bad cold. Sneezing, in an ordinary way, is a healthy action; but when it is morbid, it may be relieved by snuffing warm water up the nose, or ice-water, or laudanum, or spirits; rubbing the nose hard with the finger, or pressing hard upon the upper lip, a little on one side of the centre; bleeding the inside of the nose and snuffing cold water every morning, will prevent a recurrence of the disease.

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## PALPITATION OF THE HEART.

THIS is a subsultory vibration of the heart or arteries. The vibratory and irregular action which we denominate palpitation of the heart, is sometimes sharp and strong, in which case it is called a throbbing of the heart; sometimes the action is soft and feeble, when it is called a fluttering of the heart. It is possible for these to proceed from separate and distinct causes; one, a



morbid irritability of the muscular fibres of the heart, or some sudden stimulus applied to it, either externally or internally, by which its contraction becomes harsh and unpleasant, and gives evidence of spasmodic action. Another cause of these actions is, an irregular motion of the entire organ of the heart, by which it literally strikes against the chest. The cause of this kind of action we do not always know, though we often see it produced by a violent and sudden emotion of the mind. When, however, the substance of the heart is thus irregularly acted upon, and jerked backwards and forwards, from a cause foreign to its healthy action, the palpitation is confined to the pericardium—the membrane that covers the heart. In this case, the pulse is not affected by it. The last is probably the most common cause of the palpitation of this organ. We are indebted to *Dr. William Hunter* for having first pointed it out to us.

The heart, in its natural state, lies loose and pendulous in the pericardium; and when the jerk it receives is from an irritation of any kind, the blood is thrown with a peculiar jerk into the aorta, or large artery. The instant it reaches the curvature of this trunk, it encounters so strong a resistance that it produces a strong rebound, in consequence of the aorta being in close contact with the spine. The influence of the heart's own action is immediately thrown back against itself, and the heart, being loose, is tilted forward against the chest, between the fifth and sixth ribs, on the left side. (See *Hunter on the Blood*.) The rebound of so strong a muscle as the heart against the inside of the chest must depend for its violence upon the violence of the jerk with which the blood is spasmodically thrown into the aorta; and this has often been so violent as to be distinctly heard by the bystanders. The author has counted the pulse by the jerks of the curtains produced by every action of the heart. *Harstic* and *Schenck* both state, in their writings, that they have known the heart to beat so strongly as to dislocate and break the ribs; this is rather marvellous in our eyes. And *Dr. Portal*, of Paris, has said that the pulsation has been so strong as to rupture the muscles of the heart.

The remote causes of these affections of the heart are rarely certainly known till after death, and, for the most part, seem to depend upon a diseased structure of the heart and pericardium, by which the muscular walls of the heart have either been obstructed in their play, or have had too much liberty of action. The heart has been found ossified, or turned into bone, in its

general substance, as in the case of *Pope Urban VIII.*—*Goode*—but more frequently in its valves, or in its connexions with the aorta. “It has sometimes been thickened, and grown to an enormous size—in one instance to a weight not less than fourteen pounds.” In other cases, the heart has been peculiarly small and contracted; consequently there has not been a sufficient capacity for the influx of the venous blood. The size of the pericardium has been diminished by inflammation, or an undue growth of fat; this has impeded the heart in its action; and in other cases it has been filled, or nearly so, with adipose fluid. To these causes may be added a morbid structure of the lungs, spleen, liver, stomach, or intestines. Palpitation of the heart is a frequent accompaniment of these affections, and in these cases the palpitation is always symptomatic. It is also an occasional symptom of dropsy of the chest. In these cases, it shows itself in a very violent manner, especially if the mind be much agitated by fright or anger.

We should not, however, be hasty in deciding that the heart is diseased, since the sympathies of this organ are so numerous with so many others. All the above manifestations in action, or nearly all, may be only a functional derangement of that organ, and no actual disease of the heart itself exist; for it has not unfrequently occurred that a palpitation of the heart of long standing has gradually disappeared and left us in the dark as to its real nature.

*Dr. Cullen* gives us a confirmation of the last remark in the following very instructive case: “A gentleman pretty well advanced in life, was frequently attacked with palpitation of the heart, which, by degrees, increased both in frequency and violence, and thus continued for two or three years. As the patient was a member of the profession, he was visited by many of the faculty, who were very unanimously of the opinion that the disease depended upon an organic affection of the heart, and considered it absolutely incurable. This disease, however, after some years, abated, both in its frequency and violence, and, at length, ceased altogether; and since that time, for the space of seven or eight years, the gentleman has remained in perfect health, without the slightest symptom of his former complaint.”

*Dr. Goode* says, “A case precisely similar, and in a professional gentleman, somewhat beyond the middle age of life, also occurred to him, with a spontaneous termination equally favorable.” The same alternating spasmodic action into which the muscular sub-

stance of the heart is occasionally thrown by some of the causes above stated, seems at times to take place in the larger arteries, and extends, to a greater or less extent, in proportion to the nature of the morbid cause and degree of irritability by which they are affected. That a morbid irritability may exist in one part of an artery, while the rest is free from any such condition, is proved by the observation of many eminent physicians, for it is to be found in organs where it can be traced in the most satisfactory manner; and in the arteries we can sometimes trace them to the entire satisfaction of our senses, as, for instance, in case of phlegmonous inflammation, where we find the throbbing sensation or spasm, and relaxation, which constitutes what is meant by palpitation. This action is rarely, and perhaps never, in unison with the action of the heart. This must depend upon a local excess of irritability in the arterial tube, and has for its manifestation an alternating spasm and<sup>n</sup> relaxation, as its effect. Yet inflammation is but one cause of such subsultory action, or of the irritability which gives rise to it; there are other and numerous causes, and wherever they exist, the artery acted upon will evince the same kind of vibratory throb, though the stroke may not be so hard as that found in inflammation. This action may change its seat from artery to artery; and we have some cases on record, where the whole arterial system has been so affected.

*J. J. Rousseau* tells us, that after a paroxysm of high bodily excitement, he felt a palpitation throughout his whole system, which he could not only feel, but actually hear, at times, and it lasted throughout his life. The temporal and carotid arteries are very apt to take on this action. In these cases, the heart is apt to form the first link in the chain of morbid action. A violent palpitation of the heart is not an uncommon occurrence in delicate females, in the first months of pregnancy. This action is frequently transferred to the temporal arteries, and lasts for an hour or two, when the patient has a flush of fever, which goes off with a gentle perspiration, and is followed with a sound sleep. The patient awakes in the morning, refreshed and tranquil.

Arterial action is to be found more frequently in the abdomen, immediately in the region of the stomach, than in the head. It depends upon an increased action in the arteries immediately in that region. Persons are frequently alarmed at this palpitation, and think that there is an aneurism in the aorta descendens.

This palpitation may be distinguished from an aneurism by there being no circumscribed tumor in the part; which may be known by pressure with the fingers. *Dr. Bailly*, who had much knowledge in morbid anatomy, says, "I am enabled to say that the increased pulsation in the *aorta*, in the epigastric region, very rarely depends upon any disease of the *aorta* itself, or of its large branches in that place, and that this occurrence is almost constantly of very little consequence."

## TREATMENT.

In a disease produced by so great a variety of causes, often obscure, and very generally complicated with other affections, it is impossible to lay down any one plan of treatment that will apply to every case. Our first endeavor should be, as far as we are able, to ascertain whether the palpitation is primary or symptomatic; and if the last, while we are palliating the present distress, our attention should be chiefly directed to the primary disease. If acrimony, or any other morbid state of the stomach or bowels be suspected, this, as far as possible, should be removed by gentle purgatives, such as ten grains of calomel, worked off with a dose of castor-oil; or the compound pill of rhubarb; (see *Materia Medica*;) and the bowels should be kept open with some gentle purgative. If the disease depends upon dropsy of the chest, the remedies for that disease should be used, (which see.) If it is in consequence of pregnancy, use the remedies prescribed there. If it seem to be chiefly dependent upon a general irritability of the circulating system, or of the whole constitution, then, opium in small doses, asafœtida, musk, &c., should be given. A light diet, regular rest, keeping the bowels open, and a cheerful disposition, will be all important, and will sometimes effect a radical cure. Much of this plan will also be requisite when we have reason to believe some structural affection of the heart, or larger blood-vessels, exists; and when, from any unusual excitement, the irritation is more than ordinarily troublesome, recourse must be had to *opium*, as by far the best remedy, where it agrees with the system. The black drop, in doses of fifteen or twenty drops, or the sulphate of morphine, in quarter or half grain doses, may be given. The tincture of the hop, or the lupuline, in tea spoonful doses, or the extract of henbane, in from two to five grain doses, from one to three times a day, or in twenty-four hours. In these cases, the extract of hemlock



has been used, in similar doses, with good effect. Sometimes one of these medicines will succeed after the rest have failed. Henbane, however, of all these remedies, has proved most beneficial; it has effected cures when all other remedies have failed. The tincture of digitalis has been highly extolled, in these cases; but I must say, it has failed, in my hands, to give any relief. Musk, in some cases, has done good, in doses of ten grains each; it should be repeated according to the urgency of the case. This disease has been cured by the sudden attack of some other, as gout, or some disease of the skin, or a copious flow of urine, or the formation of an abscess. Hence, setons have been recommended and used; and no doubt, where the disease is the sequel of the sudden healing of a long discharging sore, issues will be good. Gum camphor and other aromatics have been worn on the stomach, for this disease. In all cases, absolute quietude, open bowels, and a light diet, are all important.

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## JAUNDICE.

THIS is a disease of more importance than is generally supposed by superficial observers. There are four natural and proper divisions of jaundice. We, therefore, in order to make the subject plainer, shall describe them separately, and give the causes and treatment of each species, (if the term species is admissible here,) under its appropriate head. And first,

### OF BILIARY JAUNDICE.

In this species, the course of the bile is obstructed by its own viscosity; there is general languor, nausea, with dyspeptic symptoms, with occasional pain and uneasiness at the stomach. This species occurs most frequently in the fall of the year, after the finer parts of the animal fluids have been for some weeks carried off disproportionably, by continued perspiration. This disease, in many instances, commences slowly, and progresses insidiously. There is felt a general restlessness and loss of appetite, and disturbed sleep, with a disinclination for exertion of any kind. The urine is of a deep yellow color, and generally deposits a pitchy sediment. The bowels become sluggish, and the stools are light or clay colored. The whites of the eyes and



skin look yellower than usual; and there is not unfrequently an itching of the skin. In this species, there is little or no pain in the right side, and little or no sickness at the stomach, though a frequent nausea.

## TREATMENT.

In the early stages of this variety, free vomiting is of great benefit. *Tartar emetic* alone, is better than anything else; it should be given in the usual way. It is important that the patient puke freely. As soon as the operation is over, and the patient is suffered to rest for an hour or two, the following purgative should be given :

*Recipe* : Calomel, twenty grains.  
Rhubarb, ten grains.

Mix, and give it for a dose. If this medicine produce yellow discharges towards the end of its operating, then the following should be given :

*Recipe* : Rhubarb, twenty grains.  
Aloes, twenty grains.  
Castile Soap, twenty grains.  
Tartar Emetic, two grains.

Form twenty pills. Three or four of these should be taken every night at bedtime, so as to produce one or two free motions in the morning; and the following tonic may be used :

*Recipe* : Sulphate Quinine, ten grains.  
Sulphuric Acid, five drops.  
Pure Water, one ounce.

Mix. Give a tea spoonful, three times a day, in water; or, if the patient cannot take quinine, the following may be given :

*Recipe* : Salicine, twenty grains.  
Pure Water, one ounce.

Mix, and take as above directed. If neither can be conveniently had, the following bitters may be taken :

*Recipe* : Dogwood Bark, one ounce.  
Yellow Poplar Bark, one ounce.  
Camomile Tops, one ounce.

Make all fine, and add to them one pint of good spirits and one of water. Shake the bottle every day, for three or four days. Take two table spoonfuls at a time, three times a day. The infusion of wild cherry bark is a good tonic in this disease; one ounce of the bark, put into a quart of water at night and drank the next day, will be of much benefit. It should be continued from day to day, for some time. Or you may take the following :

one tea spoonful of the sanguinaria, (percoon root,) dried and pulverized, put into a pint of warm water, at night; which should all be drank the next day. In a few days, the yellowness will all disappear. A strong bitter, made of the root of the silk-weed, and drank, so as to keep up a gentle action on the bowels, for several days or weeks, as the case may require, is a popular remedy, and by no means an inefficient one.

#### JAUNDICE FROM GALL STONES.

The free discharge of the bile, in this species, is obstructed by bilious concretions, lodged in the gall duct, which occasionally escape, and are discharged with the fæces in small lumps. This disease is attended with frequent retching, and acute pain in the region of the stomach and liver, which is increased upon eating. It is so closely connected with the following species, or variety, that we shall only give the prominent symptoms here, and leave the treatment to be given in the next variety. Yet it is necessary to give each variety its appropriate symptoms.

There may be yellowness of the skin, and urine, and great pain in the region of the gall ducts, and yet the liver may be sound. But it is often functionally connected with a morbid condition of this organ, by which the bile becomes disposed to concrete. Dissections have shown that the seat of the obstruction is most frequently in the systic duct; next in the ductus coledicus, and then in the hepatic duct. The remaining symptoms will be given in the next variety.

#### SPASMODIC JAUNDICE.

In this variety, the course of the bile is obstructed by a spasmodic contraction in the course of the bile ducts. The attack is commonly caused by the taking of acrimonious food, by hysterics, or some violent passion of the mind, and spontaneously subsides in a few days after the exciting cause is removed. The general symptoms of this affection are those of the preceding variety; but the causes of the disease are different, and the mode of treatment, in some respects, differs also. It is necessary, therefore, to attend to their specific signs, in order that they may be accurately distinguished the one from the other.

Spasmodic jaundice, for the most part, occurs in persons of an irritable habit, or in those whose liver has become affected from a long residence in hot climates, or from an undue indulgence in

spirituous liquors and highly seasoned food, or from any other cause that will produce a state of chronic irritability. So far as I have observed, it occurs more frequently in delicate than robust constitutions, and in ladies who live a very sedentary life, and chiefly after the catamenia has ceased, and the general form has assumed a more corpulent shape. There is, also, in those who are subject to it, a sallowness of the skin, indicative of irritability, and of a larger regurgitation of bile into the blood-vessels than is necessary for health. Notwithstanding all this, the liver may be perfectly sound; for the irritability may be confined to the gall ducts alone. But it may commence in the liver itself, and from thence extend to the gall ducts, which, from their structure, are far more irritable, as well as more sensitive, than the liver itself, and consequently susceptible of more pain and spasmodic action. We cannot always trace the primary cause of this disease; one thing, however, we do know: it is easily produced, in those who are subject to it, by flatulency, acrimonious and indigestible food, or by violent mental emotions. It may be reproduced or reëxcited by the application of cold to the feet, drinking cold water when the body is overheated, or by a transfer of atonic gout from the extremities to the stomach or the intestines.

The disease is ushered in by a sense of great languor and fulness in the stomach, accompanied with nausea; a violent pain at the pit of the stomach soon succeeds, with almost an incessant sickness, and an utter inability of retaining either food or medicine on the stomach. The pain grows more severe, and shoots towards the left shoulder, or spreads around the loins, and girds them as with a cord. The region of the stomach is greatly distended, and cannot endure the pressure of the hand, while the pulse exhibits but little variation from the standard of health. The bowels are generally costive, and moved with difficulty. The urine soon evinces a deep saffron tint, and the sooner in proportion to the violence of the other symptoms. The white of the eye, also, becomes yellow, and if the disease becomes chronic, the yellowness pervades the whole body, so that the organs internally, as well as the surface externally, and all the fluids, partake of the yellow tinge. Perhaps the last fluid that becomes tinged is the milk. Whilst the bile ducts are firmly locked, the fæces are without bile, and are whitish or clay-colored. The whole mass of blood is so impregnated with bile, that the solids are filled with it; hence everything the patient tastes has a bitter or bilious taste. The deeply jaundiced generally see everything of a

yellow hue, as they appear to us when looking through a yellow object-glass. Though this is sometimes the case, it is not always so. This, as well as the other varieties of jaundice, may become chronic. When this is the case, the distressing symptoms of spasmodic pains, swellings, &c., subside, although the bile does not flow freely into the proper channels, but continues, in a greater or less degree, to be absorbed and carried into the circulation. The cause of this seems to be an insensibility in the bile ducts, almost approaching to palsy. Under these circumstances, the bile that finds its way into the duodenum must be grosser than it is in a healthy state, and hence another cause of retardation and a deficient supply. Consequently, there is a change in the color, as well as the consistency of the bile, in chronic jaundice. This, no doubt, is sometimes the result of a morbid secretion, and sometimes of a chemical decomposition, from the joint influence of delay and animal heat; it being out of the circulation, under these circumstances the bile has at different times, and in different persons, been found acid, saltish, insipid, whitish, blackish, greenish, and variegated in color. It has been found dense and dark, or as tenacious and limpid as the white of an egg, or as crowded and granular as the spawn of frogs.—*Goode.* In this chronic form, jaundice has run on for a long time, even for months or years. It has alternated itself with intermittents; proved a salutary crisis for fevers, or it has itself been carried off by some eruptive form of fever; especially by miliary or scarlet fever. When the constitution has been habituated to it, the general functions are but little disturbed, so that persons may go about and perform light work.

#### TREATMENT.

In the treatment of this variety of jaundice, emetics are profitable in the commencement of the cure; but they should be mild, such as *ippecac.* or *seneca snake-root*, made into a tea. This will relieve the stomach and bowels of any crude matter that may be lodged there; but where these are not suspected to exist, emetics should not be used. When the spasms are severe, and the patient is of a full habit, bleeding should be resorted to without delay. The warm bath should be used, and opiates administered; opium, in a solid form, is preferable to laudanum. The opium should be given in one or two grain pills, and repeated as often as the stomach rejects it, till it is retained. Flannels, wet

in laudanum or hot spirits, should be applied to the region of the stomach. Blisters over the stomach are a doubtful remedy in this disease; if they are used at all, they should be applied to prevent, and not to arrest, a paroxysm. The general soreness upon pressure, and the excitement of the absorbents of the liver, as already observed, very frequently continue for several weeks after the spasm has subsided; consequently, there will be great languor and indisposition to exercise, and a tawny skin. The bowels should be kept in a soluble condition, by gentle aperient medicines, such as the following pill:

*Recipe:* Blue Mass, twenty grains.  
Aloes Cape, twenty grains.  
Pulv. Rhubarb, forty grains.  
Castile Soap, forty grains.

Mix all well together, and form *forty pills*. From five to six of these may be given every night, or as often as it becomes necessary to keep the bowels open. As soon as the patient is able, he should take exercise on horseback, go into cheerful company, and use a generous but light diet. At the same time, a tonic composed of vegetable bitters should be used.

*Recipe:* Gentian Root, one ounce.  
Orange Peel, one ounce.  
Columbo Root, one ounce.  
Quassia Wood, one ounce.

Make all fine, and add to them half a gallon of old whiskey. Shake the bottle every day, for three or four days. Take a table spoonful three times a day, in water. The German writers have extolled the seed of the common hemp very highly. They recommend that it should be boiled in milk till the seeds burst—they are then to be eaten. The Germans say, that when boiled to an emulsion, and taken, even during the spasmodic pain, they afford astonishing relief. *Herlez* says, "This remedy was of eminent service in an epidemic jaundice that prevailed at Gottingen." The dandelion has been highly extolled by many writers of celebrity, in this disease. The roots or leaves may be used—an ounce of either to a pint of water, simmered till the strength is all out, and the tea drank in the space of twenty-four hours; or the *extract* may be used in five grain pills. From four to twelve may be taken in twenty-four hours, as the stomach will bear them. The alkalies are useful in such cases; if they do not dissolve the bile in the gall ducts, they answer the purpose of the bile in the bowels, and keep them lubricated. A piece of castile soap as large as a hazel-nut may be taken every



day, or half a tea spoonful of the salts of tartar may be taken in water, three or four times a day.

The acids are of eminent service in chronic cases of jaundice. The nitro-muriatic acid is made by mixing equal parts of the two acids together. Ten drops of this may be taken in water, three times a day. It should be sucked through a quill. It is also very useful when used as a bath. When it is to be used as a bath, a pint of the acid mixture is first to be added slowly to a pint of water; a tube to fit the feet and legs is then to be made; this should be half filled with warm water. Three ounces of this diluted mixture should be put into every gallon of the water. The feet and legs must be placed in this bath and kept there till the skin tingles as if it had been stung by nettles. This will require from twenty to thirty minutes. The region of the liver and stomach may be bathed with the acid every day, of the same strength that the foot-bath is made. The foot-bath should be used twice a day. I have seen the happiest effects result from its use. It frequently, after a few days, will produce thick, green discharges from the bowels. The author cured a chronic case of this disease, of more than a year's standing, with this bath. In all cases, the bath should be continued till a strong tingling sensation is felt in the skin. It has been used as a general bath up to the neck, in some cases, with astonishing effect. Therefore, as a general application, the patient may be sponged all over the body, as well as the limbs. *Dr. Scott* had the Duke of Wellington plunged into this bath up to his chin, with decided benefit. The bath, when properly prepared, will taste about as strong as common vinegar. It should not be allowed to touch the clothing, for it will very soon destroy it.

#### HEPATIC JAUNDICE.

This form of jaundice is different from the other three varieties, both in its origin, and in the remedies necessary for its cure. The causes are, derangement of the liver from scirrhus, or other indurations of the liver or its ducts, or from tumors or hard knots on the ducts, which obstruct the free circulation of the bile. In the preceding variety, the gall bladder, or the gall ducts, are the chief seat of the disease; at least, in its commencement. In the variety before us, the seat of the disease is in the liver itself. Most generally, the preceding variety, when it becomes chronic, may lay the foundation for this variety. The course of the bile

is evidently obstructed, but rather in its secretion than in the ducts. After it has been secreted, *Boerhaave*, *Savages*, *Cullen*, *Richter*, *Vogel*, and *Selle*, all suppose it to depend upon some irritation in the liver itself, or in the whole hepatic system; but not an irritation dependent upon, or directly leading to, inflammation.—*Goode*. This irritation is of various kinds, and produces different effects; but all become causes of obstruction to a free flow of the bile into its proper channels. One of the most common effects which operate in this manner, is scirrhus—an enlargement of the whole, or some part of the liver. Another is an accumulation of the calculous secretions in its substance. Another cause arises from tumors growing on the gall ducts, or even within them; so that by their pressure the passage is entirely obstructed.

This is the worst form in which jaundice can possibly make its appearance. Although there is little or no pain, it shows that there is disease in the structure of the liver. It is frequently an evidence of a broken-down constitution. It is rarely found in the young and vigorous, but generally in those who have drank hard, or lived hard, and especially those who have been exposed to much labor in hot climates, or have suffered under repeated attacks of intermittent fever of various types.

#### TREATMENT.

It is a melancholy fact, that the art of medicine here often fails to perform a radical cure; but we must use those remedies that are best calculated to afford relief. If the remedies are used in time and properly administered, we have some prospect of doing good. The most efficient remedy here, is mercury; but this should not be given to salivation. The *blue mass*, if good,—(and here I would remark, that no blue mass under five years old, can be relied on, and as much older as you can get it, the better,)—may be given in a pill containing five grains, night and morning, as an alterative, till the gums are slightly swollen. It should then be withheld for several days, and a dose of *rhubarb* and Castile soap given, to work it off. Fifteen grains of each will form six pills for a dose. After two operations per day have been procured in this way, for a few days, the *blue mass* may be again resumed, and continued for a time. Then, the iodide of potassium may be given.

*Recipe:* Iodide Potassa, twenty grains  
Water, two ounces.

Dissolve the medicine in the water, and take a tea spoonful three times a day; if a scirrhus state of the liver be suspected, the *iodine* may be used instead of the potassa. A large plaster of the blue ointment and ammonia should be worn over the region of the liver for a long time. The *nitro muriatic* bath may be used, as before directed. A generous diet, and such exercise as the patient can bear, should be taken. Frequent friction over the region of the stomach and liver, with the hand, will be found serviceable. In some cases, small portions of Epsom salts have been serviceable; a tea spoonful taken every morning, dissolved in half a pint of water. It should be taken half an hour before breakfast.

#### BLACK JAUNDICE, OR GREEN JAUNDICE.

This variety of jaundice is characterized by occasional ejections of dark or pitchy bile, intermixed with the fæces, and occasionally vomiting of yellowish-green and acrid matter from the stomach. Great languor attends these symptoms, which is often accompanied with vertigo. There is no pain in the stomach, but there is a tenderness on pressure there.

In this form of jaundice, the liver is evidently diseased in its structure, and a morbid, deep colored bile, darkish or greenish, is secreted, instead of the natural, yellow, healthy bile. This bile seems to have lingered in the biliary passages; the finer part of the fluid is first absorbed, and afterwards the grosser, and what remains becomes still more viscid, more stagnant, and of a deeper hue. Perhaps it may be truly said, in the words of *Dr. Marcard*, that "black jaundice means nothing more than yellow jaundice of a more than usually deep dye;" yet when the real disease exists to which this name should be limited, no practitioner, who examines the very peculiar dark hue of the skin and secretions, and reflects upon the danger that accompanies it, can avoid the conclusion that it has something peculiar in its nature, and cannot be merely an intense degree of yellow jaundice. It is highly probable, that a part of the dark hue may be owing to some peculiar secretion combined with the bile in a state of morbid secretion. But along with this, there is a very great structural decay in the biliary organs, as well as the decay which gives the chief character to the disease; which so frequently prevents all beneficial effects from the best medical treatment, and, consequently, renders the disease so often fatal.

The green jaundice is sometimes to be found in the young, but

more frequently, in the middle and advanced periods of life. It occurs more frequently in men than in women, probably on account of the greater wear and tear of their constitutions, and being exposed to all weathers, and all climates; and it appears to be less connected with intemperance than yellow jaundice, and less disposed to terminate in dropsy.

The hardness and enlargement of the liver, in many instances, runs through the entire structure of the organ, but perhaps is more particularly confined to some particular part. Upon pressing the region of the liver, the patient is generally sensible of some particular hardness, but, otherwise, it is rare for him to feel any pain whatever. There is frequently a distressing itching of the skin, and sometimes a troublesome sensation of heat in the palms of the hands and soles of the feet. In some cases, the pulsations are natural, but in other cases they are slower than in health. They sometimes do not number more than forty or fifty beats in a minute. The stools are generally pale, but occasionally they are tinged with bile, of a peculiar dark or pitchy color, a part of which sometimes rushes into the stomach and is vomited up. The urine is deeply loaded with the same, and tinges the linen of a dark, tawny hue; it flows freely, and sometimes deposits a pinky sediment. The appetite varies, and the stomach is very capricious. Sometimes it will take any kind of food, and, at others, it will take none at all. The progress of the disease is always slow, and it may continue for three, four, or even seven years. The person rarely recovers his color, if he survives the disease. If he recovers, it generally becomes a few shades lighter, but its traces are always visible in the face.

When the pulse is uncommonly slow, it is generally accompanied with some disease of the head, and particularly apoplectic or epileptic fits; evidently, from the sluggishness of the circulating powers, and the necessary predisposition to congestion.

#### TREATMENT.

As the causes of this disease have never been properly defined, its medical treatment is indecisive. Mercury rarely does much good here. *Dr. Bailly* thinks he has found neutral salts of service. One tea spoonful of Epsom salts may be taken every morning, in a glass of water. But *Dr. Goode* says: "Calomel combined with antimony, is of great service." Then it may be used in the following form.



*Recipe*: Calomel, ten grains.  
Tartar Emetic, two grains

Form ten pills, and take one every four or six hours. Or, *calomel, ten grains*, and *sulphuret of antimony*, precipitated, ten grains. Form twenty pills. Give one three times a day. The above pills may have combined with each one of them one grain of gum myrrh or gum guaiacum. The tonic bitters, as advised in the preceding variety, may be used here with the hydriodate of potash, as directed in the other species, or the iodide of potassium, given in similar doses. The nitro muriatic bath should certainly be tried in this form of the disease; it should also be taken freely internally. An easily digested diet and proper exercise should be used in all cases of jaundice.

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## ASTHMA.

ASTHMA is defined in the following terms: The difficulty of breathing is temporary; it recurs in paroxysms, accompanied with a wheezing sound, and sense of suffocation in the chest, with a cough and expectoration towards the close of the paroxysm. Asthma is a disease mostly of the latter periods of life, though the young are sometimes the subjects of it. Asthma soon becomes habitual, and in some cases no doubt, is hereditary. All temperaments are subject to it, but more particularly the melancholic, or that which is a compound of the melancholic and sanguine.

The paroxysms of asthma are universally preceded by languor, flatulency, headache, heaviness over the eyes, pale urine, disturbed rest, and a sense of straitness and anxiety about the diaphragm. At the approach of the attack, the weight over the eyes becomes oppressive, and the patient becomes sleepy. Frequently at this period, there is a tingling and heat in the ears, neck, and breast, with an inclination to expel the contents of the bowels, with great uneasiness of the abdominal muscles. When an asthmatic feels these warnings, he may be convinced that his enemy is at hand. The attack generally comes on about the middle of the night, and during the first deep sleep. The cause of this has not been rendered satisfactory by any one who has written on the subject. For the most part, the patient wakes suddenly, and feels a distressing tightness about the chest, as if he were bound with cords; his anxiety is inexpressible, and he labors for breath as though every one would be his last. He is



obliged to sit erect, almost breathless, and his distressful breathing has a wheezing sound; he cannot bear the weight of the bed-clothes; he expresses a great desire for cool, fresh air; at the same time the extremities are cold; the heart palpitates; the pulse is sometimes quickened, but usually weak, irregular, and often intermitting. The abdomen is distended with flatulence; the stomach is weak, and often ejects, with great violence, a slimy and frothy substance of a greenish or yellowish color. The eyes have a prominent stare, and the face is somewhat bloated, and pale or livid. About this time, the patient, though costive before, is apt to pass a loose stool. There is a dry, hard cough, which brings up nothing but a little frothy mucus. The fit may subside, or leave the patient entirely, in two or three hours. But in other instances, the cough is far more violent and suffocative, though, in an hour or two, a tough, viscid mucus is secreted, which gradually becomes copious, and affords relief. From the severity of the struggle, the mucus is occasionally mixed with blood. But the larger the discharge of either, or both, the sooner the breathing will become easier. The paroxysm may, however, last for several hours, and the patient generally feels some degree of constriction during the whole of the preceding day. He is fortunate if the next night is passed without a return of the fit. The tendency to a return of the fit, usually remains for several nights, and in some cases, for one or two weeks. I have known cases where they recurred every night for more than a month; during the whole of which time the patient was obliged to sit up in an arm-chair.

Notwithstanding the violence of these paroxysms, the patient rarely dies in one of them. Asthmatic patients not unfrequently live to an old age, if they are not carried off by some other disease. In humid asthma, the paroxysm goes off by the discharge of a quantity of phlegm from the lungs; but in dry or nervous asthma, the paroxysm may commence and end with but little expectoration, if any, of mucus from the lungs. The humid asthma is always worse in damp weather, and the spasmodic, or dry asthma, in dry weather, when the air is dry and hot. Nervous, or dry asthma is most apt to occur under circumstances that try the nervous system; a sudden emotion of the mind will give rise to it; alteration of the wind to some other point of the compass; a change of residence, or a full meal that is not easily digested, may prove its exciter. But it frequently makes its attacks without any known cause; but suddenly repelled eruptions from the skin are a frequent cause of asthma, and the restoring of such eruption will

frequently remove the asthmatic disposition. The sudden disappearance of gout or rheumatism, in the hand or foot, or of piles, may become the source of asthma; and restoring the disease to the part from which it was repelled, will cure that form of asthma. Asthma may be produced by the inhaling of the fumes of metals and other mineral substances, or by clouds of common smoke or dust. The fogs and mists which are witnessed in large cities, are a fruitful source of asthma, and asthmatics are frequently obliged to leave them in October and November, for a drier and more wholesome atmosphere. These are patients who are laboring under humid asthma. But, on the contrary, those who are laboring under the dry or nervous asthma, long for, and seek after, such an atmosphere. Hence, we can readily see why some patients can only live in high, dry, mountainous situations, while others can only live in moist valleys. It is related by some eminent writers, that the smell of aromatic flowers will produce a paroxysm of asthma; as the rose, or the dust of ipecac., &c. If young persons who are subject to asthma become very fat or round-shouldered, they are not apt to live long.

#### TREATMENT.

In the treatment of asthma, we must keep in view the character of the species we have to treat; whether it is the dry spasmodic, or the humid species; also, the age and constitution of the patient, and the state of the system when the paroxysm is off. If the patient is young and plethoric, bleeding will be of service; but in old persons, bleeding must be resorted to with great care. The bowels should be opened by gentle purgatives, and if the patient be bilious, a dose of calomel and rhubarb will be the best; but full purging, except in cases of a full habit, should not be resorted to. A more certain remedy will be found in emetics, of which the ipecac. is certainly the best. This should not be carried to full and hard puking, but the stomach should be kept constantly nauseated, so as to puke occasionally. If the paroxysm be severe and the breathing excessively difficult, a dose of *lobelia* will often shorten the paroxysm. The ethereal tincture of valerian sometimes affords immediate relief; a tea spoonful may be given every ten minutes, in water, till five or six portions are taken. If any acid be present on the stomach, the *supercarbonate of soda*, dissolved in water, will give relief, by sweetening the stomach. Wetting a piece of brown paper in a strong solution of saltpetre,

drying it by the fire, and burning it in the room where the patient is, will, in some cases, give speedy relief. The patient should inhale the smoke. A blister on the chest, in some instances, will keep off the paroxysm the next night. I am acquainted with an old gentleman who keeps off the paroxysms for weeks, by eating a piece of rosin, as large as a hazel-nut, every day. Strong coffee is said by *Sir John Floyer*, not only to relieve the paroxysm, but to keep it off for a long time. The coffee should be the best *Mocha*, and made very strong, immediately after burning it; an ounce should be drawn for one cup, and taken without milk or sugar. This may be repeated in an hour, if the first cup should not relieve the paroxysm.

Opium should never be used in asthma; it invariably does harm, and the succeeding paroxysm comes on sooner than it otherwise would. Some writers recommend Dover's powder, but the opium in this medicine renders it of doubtful utility. When the disease is chiefly dependent on a morbid habit, the anti-spasmodics will be serviceable, such as *musk*, *castor*, *valerian*, *camphor*, or *asafœtida*; but even these will derive a great advantage by being combined with *tartar emetic* or *ipêcac*. The *hyoscyamus* may be combined with *ipêcac*., half a grain of the former with four grains of the latter, to be repeated every hour, till the lungs are relieved; then stop, as the effect will increase for several hours after. Where the feet and legs are disposed to swell, active diuretics are demanded, such as saltpetre, in eight or ten grain doses, dissolved in parsley tea, and repeated every half hour. The *chinopodium*, or Jerusalem oak, or wormseed, as it is commonly called, is said by some to be a good remedy. The leaves of the plant may be boiled in milk and water, and drank freely. or the dried leaves may be powdered, and a tea spoonful taken in molasses, and repeated every hour, till relief is obtained. The squill is, however, a better remedy. It may be given in the form of sirup, in doses of a tea spoonful, every hour. If it should puke the patient much, the dose may be lessened, or a small portion of pægoric may be added to each dose. Watch that it does not act too freely on the kidneys. This medicine is useful in both forms of asthma. The Seneca snake-root is a valuable remedy in asthma, after the operation of a dose of *calomel*. It may be given in the form of tea, as much and as often as the stomach will bear, without puking freely; a slight nausea from it is desirable. *Dr. Bree* recommends, after puking, in humid asthma, "that an ounce of good vinegar, with from one to three grains of

ipecac, and a small quantity of water, be taken every two or three hours, which will lighten the paroxysm, and tend to the surface." He also uses the following formula :

*Recipe* : Henbane, three grains.  
Nitric Acid, five drops.  
Tincture Squills, ten drops.

Mix all in a convenient quantity of water, and take it for a dose. He repeats it every three or four hours during the paroxysm. He says this has given relief when all other remedies have failed.

The warm bath should never be used in asthma, as it debilitates too much. In weak and relaxed habits, the cold bath between the paroxysms will be of great service. In such constitutions, tonics should be given in the intervals between the paroxysms. Some physicians recommend the vegetable tonics; but the author has found the mineral tonics to have a better effect. The best preparation is the *citrated aromatic wine of iron*. A tea spoonful may be taken three times a day, in sweetened water.

Smoking the dried leaves or root of the *stramonium*, (Jamestown weed,) is one of the best remedies to keep off an attack of asthma. The tobacco has been used for that purpose, but it is not equal to the stramonium. Issues placed in the arm, and kept running, are a favorite remedy with some authors; the French recommend them highly. If the patient has been the subject of bleeding piles, and they have ceased to discharge, they should be brought on again. If any long-standing eruption, suddenly cured, has been the cause of asthma, it should be brought back again; as the itch, &c. The patient should live on a generous but easily digested diet, such as Mocha coffee and light meats; little or no fruits, except oranges. Ginger tea and acidulated waters will be good. When asthma is dependent on indigestion or dyspepsia, or an affection of the liver, stomach or bowels, the primary disease should be cured, or no cure can be expected of the asthma. Exercise on horseback is good. If it is a man who is laboring under this disease, ploughing in the spring and summer, that he may smell the fresh earth, will be beneficial to him. The feet should always be comfortably clad, and kept dry.



## DROPSY.

DROPSY is susceptible of being divided into several different forms, according to the parts principally affected; but we design to treat all the various forms that are common to grown persons under this general head; dividing, however, the important modifications of the disease by sections, in which the symptoms and treatment will be specially given, according to the form which the disease assumes, and the particular place where it is found.

We shall first notice that form of dropsy which makes its appearance in the cellular substance. This variety of dropsy may extend through the cellular substance of the whole body. The second variety is limited to the cellular membrane of the limbs, and chiefly of the feet and ankles; it is most manifest in the evening. The third variety not only has swelling in the feet and ankles, but there is a stiffness and numbness of the joints; and the swelling rapidly extends to the belly, and from that to the chest, with difficult breathing, and great anxiety of countenance.

General or local debility is a general cause of dropsy. It is frequently brought on by hard labor or intemperance, poor diet, fevers of various kinds, exhausting discharges, or some form of disease of some of the abdominal or thoracic viscera, which impedes the circulation of the blood, thereby producing distension or congestion. Dropsy is common to all ages, but is most frequently found in advanced life. The swelling of the feet and ankles, with which symptom it generally opens, appears at first only in the evening, and disappears by morning; but by degrees it becomes more permanent and ascends higher up the limbs, till not only the thighs, but the hips and body are affected, and even the face and eyelids become swollen, and the complexion loses its healthy appearance, and looks pale and waxy. A general inactivity pervades all the organs, and consequently all their respective functions. The pulse is slow and often depressed, and always hard; the bowels are costive; the urine, for the most part, small in quantity, and highly colored; the breathing is difficult and wheezy, and is accompanied with a cough that brings up a little mucus. It gives no relief, however, to the sense of weight and oppression in the chest; the appetite fails, the muscles become weak and flaccid, and the general frame emaciated. The patient is not able to undergo any fatigue, or to



make any exertion of consequence, either of body or mind; a general languor and drowsiness attends the case. The patient generally has great thirst, with fever and debility. The swelling pervades the whole body, more or less; but the abdomen, at this stage, generally becomes very much distended, and by placing one hand flat on one side of the abdomen, and striking the other side with the other hand open, you may feel a fluctuation of the water, and, in some cases, you can even hear it slush, if the ear be held close to the abdomen. The skin in some parts being more relaxed than in others, is apt to give way more, and the swelling to become more prominent there, so as sometimes to hang in bags. Sometimes the skin or cuticle cracks, and the water oozes out in a perpetual trickle. The difficulty of breathing proceeds partly from an overloaded state of the lungs, and partly from general debility. The pulse becomes weaker and more irregular; slight clonic spasms ensue, and death puts an end to the patient's suffering; and yet the progress is slow, and many months may elapse before the end comes.

#### TREATMENT OF CELLULAR DROPSY.

We must first endeavor to ascertain the cause of this form of dropsy, before our remedies can be properly directed. A simple swelling of the feet and legs may be caused by chlorosis or by pregnancy. When this is the case, it may be palliated by bleeding; but the exciting cause must be removed before anything permanent can be done for the dropsy. (See *Chlorosis* and *Pregnancy*, and the remedies there prescribed.) But, as we have said, general dropsy may be produced by intemperance or a sedentary life, or poor and unwholesome food, or an obstinate fit of jaundice. These must all be corrected before any plan of treatment can succeed; for even if we succeed in removing the water before the exciting cause is removed, it will assuredly accumulate again. The occasional cause may, however, no longer exist, as when it is the sequel of fever or some eruptive disease, which has left the constitution an entire wreck; or it may exist and be itself incurable, as where it proceeds from a scirrhus state of the liver, or an incurable disease of some other internal organ. In this case, our object should be, if possible, to remove the original cause, and at the same time to palliate, as far as possible, the dropsical condition of the system, whilst we are endeavoring to accomplish this object.

Various means have been resorted to for the removal of the water from the cellular membrane. The medicines used for this purpose are those which act upon the secretory powers of the system. They may act on the kidneys, skin or bowels. We shall therefore take notice of them under the heads of emetics, purgatives, diaphoretics, and diuretics.

And, first, *of emetics*. Emetics can rarely be used, in the cure of dropsy, any further than to clear away the obstructing matter from the stomach and liver, so that other medicines may be advantageously given. Therefore, when the tongue is white, and other evidences of a foul stomach exist, it may be well to commence the cure by the administration of a gentle emetic. This should be followed by a cathartic, and none, perhaps, is equal to a full dose of calomel. It will then be proper, in all cases where the strength will bear it, to take fifteen or twenty ounces of blood from the arm, according to the age and strength of the patient. If there is a diseased state of the liver, calomel or blue mass should be used, to act as an alterative on the system. As an active cathartic, many medicines have been recommended to be used; but all are inefficient as a cathartic for discharging water, with the exception of a few. The following is an active formula, which may be given after the secreting organs have been put in good order.

*Recipe:* Cream Tartar, one ounce.  
Pulv. Jalap, half an ounce.

Mix them properly together. This may be given in parsley or horse-radish tea; a tea spoonful from three to six times a day, according to the activity of the operations. The tea should be freely drank at the same time. This medicine will generally carry off the water in large quantities. Or the following may be given, when the patient is depressed and very weak:

*Recipe:* Glauber's Salts, one ounce.  
Refined Saltpetre, half an ounce.  
Pulv. Rhubarb, half an ounce.  
Pulv. Gum Camphor, two drachms.

Mix them all well together. This medicine may be given in the same way that the cream of tartar and jalap are directed to be given. I have known several gallons of water to be passed off by urine and stool, by the use of this medicine, in forty-eight hours, after it was once started, which generally requires ten or twelve hours. The illaterium is another powerful hydragogue. It may be given in the following way:

*Recipe:* Illaterium, three grains.  
Castile Soap, twelve grains.

Form twelve pills. From two to four of these may be given in twenty-four hours, according to the effect; but in no case should more than four be given in twenty-four hours. It would (in the hands of any but a physician) be better to give only two pills a day, and continue them longer, till the full effect is produced; for sometimes this medicine acts very powerfully. The *dwarf elder* has been highly recommended by many writers on the subject of dropsy. It should be given in the form of a tea made of the bark, in such quantities as the stomach will most conveniently bear. I have known some good result from its use. The best mode of preparing it is to take the inner bark from the root and boil it pretty strong. From one to two table spoonfuls will generally be sufficient for a dose. The dose may be repeated from three to six times in twenty-four hours, according to the effect produced.

Dropsy sometimes succeeds to scarlet fever, where the case has been badly treated, or the patient neglected, especially in keeping the skin clean after the eruption had died away. The swelling generally commences in the loins, and extends over the body and limbs; the face looks puffed, pale, and waxy; the pulse is quick and feeble; the urine is dingy and coagulable; the surface of the body is dry, smooth, and cold. The treatment is simple. The skin must be first cleansed with soap and water; then the patient must be dressed in flannel, kept in bed, and have a warm bath every night; and take the following medicine:

*Recipe:* Acetate of Ammonia, three drachms.  
Antimonial Wine, ten drops.  
Sirup Poppies, ten drops.

Mix for a dose. To be repeated every four hours; and the following powder every night, at bedtime:

*Recipe:* Pulv. Ipecac., three grains.  
Hydrargyri cum creta, five grains.

Mix, and give in sirup, at bedtime. When the water and swelling are all removed, give:

*Recipe:* Aromatic Wine of Iron.

A tea spoonful, three times a day, in sweetened water, till the strength is restored. The diet should be generous and free.

*M. Debrayne* gives the following medicine in dropsy; and he says it rarely ever fails to cure, when properly used:

*Recipe*: Pulv. Jalap, two drachms and a half.  
 Pulv. Squills, two drachms and a half.  
 Refined Saltpetre, six drachms and sixteen grains.

Put all into three pints of white wine. Shake the bottle well, and let it settle. Give a table spoonful three times a day. The quantity is to be gradually increased, till nine table spoonfuls are taken in twenty-four hours. But if the swelling is confined to the feet and legs, the doctor gives what he calls his weak wine, in place of the above. It is prepared as follows:

*Recipe*: Refined Saltpetre, half ounce.  
 Bruised Juniper Berries, two and a half ounces.

These medicines are to be macerated, as before, in three pints of white wine, for twenty-four hours, and then give a common wine-glassful three times a day. These remedies, he says, are most efficient in passive dropsy. After the water is removed, the usual tonics are to be given, to prevent its return. They will be noticed presently.

#### DROPSY OF THE CHEST.

The causes of dropsy of the chest may be any of the causes enumerated for dropsy of the flesh and abdomen, with this additional one, a hepatized state of the lungs, or a diseased condition of the heart. When the lungs are hepatized, there are spots on their surface of the color and consistence of liver. When the chest is filled with water, the patient cannot lie down without a sense of suffocation. The breathing is difficult; the face, wrists, and back of the hands are swollen; the lips are of a dark or purple color; the action of the heart is rapid and irregular; the pulse is soft, quick, compressible, and intermittent; on concussion of the chest, the sound of the water can frequently be heard, when dashed against the ribs on the opposite side; the heart is sometimes displaced, and beats on the right side, or in an unnatural place. It is not my business in this work to theorize on disease, but I shall be pardoned here, if I give a short theory of this form of dropsy. It will enable you to pursue the treatment with more courage, on which the life of the patient depends. I would say, *first*: that all the symptoms in this form of dropsy show clearly that they are produced by, and kept up from, venous obstruction and its consequences; and venous obstruction is caused, either by a diminished capacity of the lungs, or by an increase of the circulation of the mass of venous blood, or by both of these combined. *Secondly*: that the

disease is not of an inflammatory nature. *Thirdly*: that the disease, with the exception of the early part of its course, is attended with more or less of general debility. From these facts before us, what curative indications can be deduced from them? Common sense would say, and physiologists will bear me out in it, that we must first remove the venous obstruction, before we can remove the deposit of water; and this must be done, either by increasing the activity of the lungs, or by diminishing the circulating mass of venous blood. With respect to the first of these alterations: the capacity of the lungs is, in dropsy, either natural or diminished. When natural, as it is in cases arising from cold or plethora, it would be absurd to imagine that it would be increased by any means. And when diminished, as in cases arising from hepatization, and a variety of other causes, it follows, as a matter of course, that we must adopt the other alternative, that of diminishing the circulating mass of the venous blood. This being the principal curative indication, it can only be properly effected by the lancet. I now speak from experience; and I acknowledge that great caution is necessary to carry out the practice I am now about to give; but it has been done, and can be done again with safety.

Let the patient be at as perfect rest as possible; bleed him from a small orifice in the arm, to ten or twelve ounces. If he becomes faint, give him a little hot broth, or Holland gin; (one part of gin and four parts of water.) Here I will relate a case. The patient had had scarlet fever, and when Dr. — saw him, he was sitting up in bed, and doubled forwards; that being the only posture, he said, that he could breathe in. He had now remained in that position for two days. His face, neck, trunk, lower extremities, and hands, were greatly swollen; his lips were of a dark purple color, and the wings of his nose were in rapid motion; his pulse was full, soft, compressible, and intermitting, and the action of the heart tumultuous and irregular; his breathing was extremely difficult, and on concussion of the chest, the sound of a large quantity of water splashing in both cavities of the chest could be distinctly heard; the abdomen was much distended, and evidently contained a large quantity of fluid; he had not passed more than two ounces of urine in the last forty-eight hours, and that was very highly colored. He was bled from the arm to the amount of ten ounces. When about five ounces had run, he exclaimed: "Doctor, you have saved my life!" And when his arm was tied up, he was able



to lie down with comparative ease. The blood drawn was neither buffy nor cuped. He was now ordered to have fifteen grains of the following medicine, every hour, till his bowels were freely moved; and afterwards to take a cup of chicken broth:

*Recipe:* Cream of Tartar, half an ounce.  
Jalap, two drachms.

Mix, and divide into twenty-four papers. To be given as above directed. Now eleven o'clock in the forenoon. At eight o'clock in the evening he was seen again. His bowels had been freely moved, and he had passed more than a pint of highly colored, lateritious urine; his breathing was now greatly relieved; his pulse, though quick, was firmer, and no longer intermitting; the action of the heart was much less violent, and more regular, and the swelling was every way greatly diminished. Finding him not complaining of weakness, and his pulse firm, he was bled again, six ounces. The above powders were continued. He slept during the night, half an hour at a time; he had some watery discharges from the bowels; he passed some urine of a clearer color. On the following morning he was still improving. The last-drawn blood was neither buffed nor cuped. His pulse being firmer, he was bled again, six ounces, and the same medicines continued. In a few hours after, he had several watery stools, which seemed to distress him very much, and, for the first time, he complained of weakness, and asked for animal food, which he was allowed to have, and some weak gin and water occasionally. The powders were now discontinued, and he was directed to keep as quiet as possible. He slept soundly nearly all that night, and frequently passed considerable quantities of clear urine. From this time all the dropsical symptoms rapidly left him. He only took his gin and water, and animal food. In ten days from the first bleeding, he was out, and rapidly convalescing.

I acknowledge this to be a bold and daring practice; but it is founded upon the above theory, and the result was satisfactory. A number of cases of a like character have been cured by a similar course of treatment. But where the lungs are hepatized, we must not only use the lancet, but blue mass and squills should be given till the gums are swollen, and the patient spits freely, but moderately, for some time. The following prescription may be used:

*Recipe:* Blue Mass, sixty grains.  
Powdered Squills, twenty grains.  
Gum Camphor, twenty grains.

Form twenty pills. One may be given three times a day, till the above effect is produced. In convalescence from dropsy, the tonic treatment must be used. *Huxham's tincture* may be given, a tea spoonful three times a day, or the aromatic wine of iron, as often, in similar doses. The diet should be generous, and a little Holland gin and water should be taken three or four times a day. Avoid exposure.

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## DIARRHŒA, LAX, OR LOOSENESS.

THE general character of this disease is, that the discharges from the bowels are crude, and too frequent; with little or no griping or straining. There are a variety of forms or species of this disease. The chief cause of them all is, an increased peristaltic motion of the bowels, in part, or throughout their whole course, and this action may be produced by various means, and under various circumstances. And these causes often stamp a peculiarity on the character of the disease; and this lays the foundation for various species. The increased action of the bowels may be produced by irritating materials taken in by the mouth; secondly, by a morbid change in the fluids which are naturally secreted in the intestinal canal; thirdly, by an irritable state of the intestines themselves, or the membrane that lines their inner surface,—or the intestines may associate with the action of some one or more remote organs, and so manifest this disease in some one of its forms. Thus, sudden passious or emotions of the mind will frequently excite looseness. Sudden cold or heat applied to the surface of the skin, will do the same. A sudden check of profuse perspiration, may also excite this action. The fluid of dropsies, the morbid matter of some eruptive fevers, as smallpox, varioloid, chickenpox, scarlatina, measles, etc., may be thrown upon the bowels, and produce a looseness. But as these last are not primary, but causes producing the disease by sympathetic action, we shall not treat of them here, but shall refer the reader to their appropriate places, under their proper heads. However numerous, therefore, the subdivisions of diarrhœa may be, those that really belong to it, as genuine and distinct species, may be found in the following. And as

there is some difference in the proper mode of treating each species, we shall enumerate and describe them, and then give to each its appropriate treatment. They stand in order as follows: *feculent looseness*, *bilious looseness*, *mucous looseness*, *chylous looseness*, *lientery*, *serous looseness*, *tubular looseness*, *gypseous looseness*. We shall now take these up under their appropriate names; and first, of

## FECULENT LOOSENESS.

The common cause of this species is food heated to excess, or intermixed with an undue proportion of irritating materials,—too much salt, sweets or acids,—in consequence of which, it passes rapidly, not being thoroughly digested. The intestines are urged to an undue activity. Hence, it is often the case, that prior to an undue looseness, there is an unusual heaviness in the stomach, with acid, or more or less pain, in weak stomachs, or where the bowels are sluggish. This mode of diarrhœa is also occasionally produced by a retardation of the aliment till it becomes acid, or more or less putrid,—or a superabundant accumulation in the bowels may produce it; and, where it is not checked in due time, and the exciting cause is kept up, it will run into a chronic form and become very troublesome. There are a variety of other causes that may produce this form of looseness, such as cold bathing, sudden fear or fright, or passion, where there is a peculiar irritability of habit.

## TREATMENT.

When this disease is produced by an overloaded stomach, and acid eructations precede the purging, the better course is to drink a glass or two of water, with half a tea spoonful of soda dissolved in each glass, to neutralize the acid. Then take some mild purgative, such as the compound rhubarb pill, or magnesia, or castor-oil, and be careful, afterwards, to avoid the exciting cause.

## BILIOUS LOOSENESS.

In this species, the stools are loose, copious, and of a bright yellow. From the highly bilious color of the stools, there can be no doubt that the bile is secreted in a greater quantity than usual and probably has an unusual degree of pungency, which causes the increase of peristaltic action. This species of diarrhœa is more apt to occur in warm than in cold weather, and is of more fre-

quent occurrence in hot than in cold climates. The diarrhœa produced by a sudden change from a cold to a hot climate, or by being a long time exposed to a high temperature of the sun's heat, depends upon an increased action in the liver, and an undue secretion of bile, with an increased acrimony. In inter-tropical climates, the bile secreted is sometimes more than the bile ducts can conveniently carry off, and some portion of it retrogrades, and is carried by absorption into the system, and becomes one of the causes of the darker hue of the skin, in those climates. In our own country, this species of diarrhœa is met with most commonly in the earlier parts of summer, when the heat suddenly and vehemently bursts upon us from a cool and backward spring, or in autumn, after the person has been exposed for many weeks to the effects of a vigorous sun, relaxing and debilitating the whole system. If the atmosphere be pure at this time, the disease is simple, and may be subdued without much difficulty; but if the air is charged with a strong miasmata, then the simple bilious diarrhœa will be converted into a remittent bilious fever. But this we have treated of in its proper place.

## TREATMENT.

When bilious diarrhœa is simple and unconnected with fever, it is easily cured, if early attention be given to it. A few cathartics of the proper kind will generally be sufficient.

*Recipe:* Calomel, ten grains.  
Aloes, ten grains.  
Rhubarb, ten grains.

Form six pills. Give three first, and the other three in two hours. Work them off with gruel, rice, or barley-water, or some mucilaginous drink, to sheathe the bowels from the acrimony of the bile. If the person cannot take calomel without affecting the mouth, the following pills may be used.

*Recipe:* Aloes, twenty grains.  
Rhubarb, twenty grains.  
Tartar Emetic, one grain.

Form six pills. One of these may be taken every hour, till they operate freely. In this case, the discharge of bile will be yellow and thin, but a repetition of the medicine will carry it all off. If the symptoms are aggravated, and any fever exists, before medicine is given, the cure may be commenced by giving an emetic.

*Recipe:* Ipecac., twenty grains.  
Tartar Emetic, three grains.

Give, and work this off in the usual way. Then give the above pills. If the irritation of the bowels should continue after the operation of these medicines, then the following pill should be given :

*Recipe* : Camphor, two grains.  
Opium, one grain.  
Ipecac., five grains.

Form two pills. Give one at a time, an hour apart; drink freely of some of the above teas, warm, to aid in the determination to the skin. The subacid fruits will be found advantageous in this form of diarrhœa; such as the preserved fruit of the common dewberry, or blackberry. The diet should be light and easy of digestion; exposure to the heating rays of the sun should be avoided in convalescence.

#### MUCOUS DIARRHŒA.

This is characterized by a copious discharge of mucus from the bowels. The mucus discharged in this disease, bears a considerable resemblance to the mucus discharged from the nose in a bad cold. The common cause of this form of diarrhœa is cold applied to the feet. The discharges are acrid, producing a heating, scalding sensation as they pass, often with but little bilious tinge. No doubt but the discharge of mucus in this disease, is increased by the secretions from the nostrils, and other parts, being swallowed, and commingling with the morbid secretions of the mucous coat of the bowels. As acrid substances, taken into the nose by those not accustomed to them, will produce an increased mucous discharge from the membrane of that organ, so may acrid substances, taken into the stomach, produce an acrid, mucous discharge from the intestines. It is also produced by the sudden action of cold air on the skin, after being for some time exposed to the hot and relaxing action of warm air upon it; hence, sudden transitions from heat to cold, or from a hot climate to a cold one, may expose the patient to attacks of this disease; or persons suddenly leaving a very warm room, and exposing themselves to the chilling blasts of a cold wind or heavy air, may bring on this form of diarrhœa.

#### TREATMENT.

Where the disease is brought on by sudden exposure to cold so as to throw the weight of secretion on the mucous surface of



the bowels, it will be proper to commence the cure by giving the following medicine :

*Recipe:* Calomel, ten grains.  
Ipecac., five grains.  
Opium, one grain.

Mix for a dose. After this has been taken two hours, a dose of *castor-oil* should be given, to work it off. If the disease is not arrested by this dose, it may be repeated, and then followed by some warm aromatic, such as *clove tea*, with three or four grains of *ipecac.* and the tenth of a grain of *opium*, every two hours, till eight or ten powders are taken. The following should then be given :

*Recipe:* Blue Mass, twenty grains.  
Rhubarb, ten grains.  
Scammony, ten grains.

Form ten pills; give five first, and the other five in two or three hours. After the operation is over, if there is any pain in the bowels, ten grains of Dover's powder may be taken, and a portion of senna tea the next day. If the bowels are much weakened, the patient may take the following bitters in convalescence.

*Recipe:* Gentian Root, half ounce.  
Orange Peel, half ounce.  
Columbo Root, half ounce.  
Black Snake Root, half ounce.

Make all fine, and add to them a pint of old spirits and a pint of water. Shake the bottle once a day, for three or four days. Then take a table spoonful, three times a day, in water. The diet should be nourishing and easily digested.

#### CHYLOUS LOOSENESS.

The characteristic sign of this disease is a milky discharge from the bowels. This depends upon a deficient admixture of bile with the *fæces*, either from a deficient secretion of the liver, or a locked state of the gall ducts, and the food, when converted into chyle, is not taken up and carried into the system. This must proceed from some defect in the lacteal vessels, or in the mesenteric glands. There may be actual disease in these parts, or a torpor which prevents the due and healthy functions of these organs; on the first examination of the patient, we cannot always distinguish between these two states. If the patient has hitherto been healthy and robust, and the disease has come on suddenly, then we may, with great propriety, refer the disease to a sudden

obstruction of the lacteal vessels, or of the mesenteric glands. On the other hand, if the bowels have for some time been becoming more and more loose, and the discharge more and more milky, and the patient is weakly, then we may suspect that there is disease in one or both of the above-named organs, or the gall ducts have been obstructed, or there is a deficiency of bilious secretion.

#### TREATMENT.

Where we suspect only a torpor of the organs, and not an obstruction, some warm stimulating medicine will be proper, such as the warm aromatic bitters, with gentle purgatives.

*Recipe* : Rhubarb, twenty grains.

Aloes, twenty grains.

Myrrh, ten grains.

Mace, five grains.

Form twelve pills. Two of these may be given every two hours, till they operate freely, and, then the aromatic bitters may be given, three times a day, in small doses; such as Huxham's tincture, a tea spoonful at a time. A little good French brandy and loaf sugar may also be taken two or three times a day. The diet should be mostly light animal food. But where there are evident signs of visceral obstruction, either in the liver or mesenteric glands, the above medicines will be injurious. Here we must resort to calomel in full doses, and repeat a few times; then the blue pill and aloes will be proper. While, in the former case, blisters and rubefacients will be useful, applied to the abdomen. here they should be applied, if at all, to the region of the liver. Great care is necessary in order to bring the secreting organs into a healthy condition, and to keep them so. After the mercurial action has been carried far enough to restore the secreting organs to a healthy action, this function must be maintained by proper tonics, till a healthy action is established. For this purpose, the metallic tonics are preferable. The aromatic wine of iron is one of the best. A tea spoonful may be given, three times a day, in water; or four or five grains of the sulphate of zinc may be taken, thrice a day, in sugar; or the *citrate* of iron may be used,—forty grains to the ounce of water,—and taken as directed for the aromatic wine of iron. The *nitro-muriatic acid* may be taken, in ten or fifteen drop doses, in water, three times a day. The diet should be light and easily digested; exercise on horseback or in a carriage, will be beneficial; keep the surface of the body comfortable, and the feet dry and warm.

## LIENTERY.

In this disease, the food passes rapidly through the bowels, undigested. The stomach, in these cases, is always in an unhealthy state, and the gastric juice is not secreted either in a proper state or in proper quantities; and the bile is not duly secreted, or is obstructed in its passage. The former is the most probable, from the absence of severe pain in the stomach and region of the gall ducts. If there be a free flow of bile, the fæces will be tinged with it, whether the food be well digested or not. It is most probable that the peristaltic action is increased by the stimulus of the crude, undigested food. The general treatment recommended in dyspepsia, will be found best adapted to the cure of this disease; for all the symptoms found here, are found there to a greater or less extent. In all cases where the general tone of the stomach is impaired, we find flatulence, nausea, and other dyspeptic symptoms, accompanying the looseness; we therefore refer the reader to the chapter on dyspepsia, for the remedies proper to be used in the cure of this disease.

## SEROUS LOOSENESS.

In this form of disease, the stools are almost entirely liquid, and pretty clear. From the fluidity of the stools in this species, it is evidently dependent on a very irritable state of the excretory vessels of the intestines. The irritation here is much greater than in mucous diarrhœa. Mucous diarrhœa, or any of the preceding species, may run into it, if long continued. The patient may have from ten to twelve of these liquid stools in twenty-four hours. *Dr. Goode* relates a case that lasted ten years, and the lady had passed more than ten liquid stools a day, for that period of time.

## TREATMENT.

In the early stage of this disease, a few large doses of calomel combined with opium, should be given.

*Recipe* : Calomel, twenty grains.  
Camphor, five grains.  
Opium, two grains.

Mix for a dose. This may be taken at bedtime, and if it should not operate well by morning, a dose of *rhubarb* may be given. If the first dose should not arrest the disease,—and it frequently will, if it is given in the first twenty-four hours of the

attack,—it should be repeated, and again followed by the *rhubarb*. Should the disease continue after the secreting organs have been properly corrected, then astringents should be used, such as :

*Recipe* : Sugar of Lead, twenty grains.  
Powdered Opium, two grains.

Mix properly, and divide into four papers. Give one every six hours, in a little sugar. It should always be followed, the next day, with a dose of *castor-oil*. A decoction of the bark of the pomegranate tree, combined with the leaves of the red rose, and cinnamon bark, was once a very popular remedy in this disease, and it is still used in Europe in these cases. But a far better astringent will be found in the sirup of the *diospyros virginiana*,—the common persimmon fruit. (See *Materia Medica* for the mode of preparing this sirup.) A tea spoonful may be given every time the patient has a stool; and if there are any griping pains in the bowels, five drops of laudanum may be given in every dose. The native *carbonate of zinc*, or the *lapis calaminaris*, has been used by some of the most respectable physicians in Europe, in this disease. The dose is ten grains, three or four times in twenty-four hours. The camphor mixture is a valuable remedy in this disease. It may be given in two table spoonful doses, and repeated every two or three hours. The bowels, under these circumstances, are to be kept open with the warm stimulating gums, such as *aloes*, *asafoetida*, and *myrrh*, in equal quantities, formed into pills. Two pills may be given every night, at bedtime. The warm aromatic bitters may be used also. The diet must be very particularly attended to, and nothing should be taken that produces any pain, or is at all indigestible. The food should be entirely lean meats and bread, and the drink plain water. Flannel should be worn next the skin, and the feet kept dry and warm.

#### TUBULAR LOOSENESS.

This disease is characterized, as the name imports, by the discharge of membranous tubes; rather whitish, viscous, and inodorous. This disease does not occur very frequently, but sufficiently so to require our attention. It depends upon a peculiar irritability of the mucous coat of the bowels, especially the large bowels, which, in consequence of their irritability, secrete an effusion of coagulating fibrin, mixed with gluten, instead of

secreting mucus; it is occasionally accompanied with some degree of inflammation. It has a striking resemblance to the fibrous exudation thrown from the trachea in croup, with this exception,—it is redder, and sometimes two or three feet long. The tube is sometimes perfect, so that it resembles the intestine, being hollow and entire. In other cases, it is broken, and has holes in it. Patients are frequently alarmed, thinking that they are discharging the whole of the inner coat of the bowels. There is generally a considerable sense of heat in the rectum or lower bowels; and the stimulus is so great that the sphincter muscle is contracted so closely that it requires considerable straining to pass the fæces, and when discharged they are in a small, round form. This tube loses its form as soon as it is handled; it will not bear extension. This peculiar discharge may continue for weeks, if not properly treated. When the irritation extends to the duodenum, the liver may partake of the irritation by sympathy, and the gall ducts may contract, and pain and sickness at the stomach may be experienced by the patient. The tongue is generally lightly coated, and there is a slight fever, but no evidence of active inflammation of the bowels. The portions discharged vary in length and consistence; some not more than one or two inches long, and others more than two feet. They may be discharged for several days in succession, till it would seem that the whole length of the alimentary canal had sent off its inner surface. In these cases, the pain in the smaller intestines is very acute, and also in the bile ducts, from the spasmodic constriction there; and the common symptoms of jaundice, the passing of gall-stones, may be suspected, till the character of the discharge speaks for itself. From painful menstruation and a slight inflammatory action in the uterus, fibrin may be secreted, and a species of deciduous membrane may be discharged by those who never knew the other sex.

#### TREATMENT.

The milder preparations of mercury are here most certainly indicated. The form which I have used with the most success is the *blue mass*. Ten grains may be taken, three times a day. Large injections of warm water and milk may be thrown into the bowels. *Balsam copaiba*, in ten or fifteen drop doses, may be taken, on sugar, three times a day, and will be found an excellent remedy. If the stomach reject it, it must be given in



injections; three drachms at a time, three times a day. The milk of sulphur is an excellent purgative in this disease. The sulphur, mercury, and balsam, will cure the disease in a few days, in conjunction with rest, and a light, mild diet. The drink should be mucilaginous.

## GYPSEOUS LOOSENESS.

This singular disease is characterized by liquid, gypseous, or darkish discharges, with a frothy scum on the surface. This, like the two preceding species, is produced by an irritable state of the intestines, occasioned by an increased secretion of morbid matter of this appearance; but in each of these species the secretions differ considerably. In the first, it is dilute and serous; in the second, it is viscid, and compounded of fibrin; but in this species it is serous, and compounded of earth and lime. Almost all animals are possessed of a power of forming this earth, or of separating it from the blood. (for we do not precisely know which,) for various important purposes; as that of giving firmness to the bones, or hardness to the hoofs of animals, or to the shells of eggs, &c. This power certainly can be traced in all animals, and in all ages; and it shows itself in a state of health or disease, in almost all the organs. In mankind it commences and grows with the fœtus; it accompanies us through mature life, and in advanced years, it not only continues without failure, but occasionally increases with the failure of other secretions, so as in some cases to convert the blood-vessels into bony canals. It settles in the form of tartar around the teeth of aged persons, and is sometimes found in nodules or masses on the surface of the lungs; it therefore lays the foundation for many diseases; there is, therefore, no difficulty in tracing the source of the gypseous, limy material which forms the peculiar species of disease now before us. In general, when this is secreted in the bowels in more than ordinary quantities, it unites itself with some glutinous animal matter, assumes solidity, and increases by fresh concentric layers. But in gypseous diarrhœa no such tendency to combination exists; but the earthy particles are diffused loosely and separately through the fluids with which they are discharged. When the disease is violent, the discharges are copious, and very numerous; of a pale color and sour smell, and the froth looks like yeast. When it changes to a milder form, the evacuations are still more or less pale, but of the con-

sistence of pudding, and do not occur more than two or three times in twenty-four hours. The appetite is not always impaired. The countenance is thin and sallow, but not much emaciated; the pulse varies but little from the standard of health; the tongue is generally covered with a light, white fur; the urine is deeper colored than natural, generally clear, but occasionally turbid; the bowels are apt to be distended with wind, but there is no swelling, or sense of pain upon pressure.

This disease occurs most frequently in persons who have resided some time in a warm climate, or who have suffered from affections of the liver; but it is sometimes met with in persons who have never had any disease of the liver. It is more common in men than in women. Perhaps this is because men endure the evils of hot climates more than women. There are occasional appearances of recovery from this disease without medical aid, but the disease generally returns again as bad as ever. This disease becomes worse under embarrassment in business, or any other cause that disturbs or depresses the mind.

#### TREATMENT.

The remedies for this disease are few, but simple. Small doses of calomel, or blue mass; small doses of laudanum, or Dover's powder; strengthening bitters, animal food, friction over the abdomen with nitro-muriatic acid, and a cheerful employment, constitute the chief remedies for the cure of this disease. The calomel and Dover's powder may be given in the following formula:

*Recipe*: Calomel, twenty grains.  
Dover's Powder, eighty grains.

Mix; and divide into twenty powders. One of these may be taken at bedtime and another in the morning; or five grains of Dover's powder may be taken at bedtime, and ten grains of blue mass in the morning. An excellent bitter will be found in the salicine, in one or two grain doses, three or four times a day. Flannel, or silk, should be worn next the skin, and fatiguing exercise should at all times be avoided. Keep the feet dry and warm.

## CHOLERA MORBUS.

THE characteristics of this disease are, vomiting and purging of bile, and other morbid matter, with great pain in the stomach, and severe griping in the bowels. This disease is both sporadic and epidemic. When it occurs only occasionally, it is called sporadic, and is not so violent as it is when it prevails epidemically. Its common causes are, a superabundant and acrid bile; suppressed perspiration, particularly by damp or cold applied to the feet, as by standing on moist ground in damp and foggy weather; large draughts of cold water, especially, when the body is overheated by violent exercise; green, indigestible fruits, as unripe apples, pears, cherries, currants, gooseberries, melons, cucumbers, mushrooms and other indigestible articles; the heat of a vertical sun, and a sudden check of perspiration, are all occasionally the cause of cholera morbus. The causes are, therefore, the same, in many instances, that produce colic or diarrhœa. The discharge from the stomach is not always bile, but frequently a whitish, glary fluid, like the white of an egg. This is evidently pancreatic liquor. The bowels generally act first, and, after a few painful, griping evacuations, the vomiting commences. The sickness and prostration are extreme. The stomach is all the time sick, and everything is ejected that is taken into it; the strength fails rapidly. The pulse becomes feeble and soft, and the extremities cold, and cramps take place in the hands and legs. Hiccough supervenes, and the patient, in the most extreme agony, dies in twelve or twenty-four hours. This is the worst form of the disease. Where the symptoms are not so violent, the patient, after two or three days' violent suffering, recovers. The acrid bile that flowed so freely upwards and downwards, ceases to be discharged, and great prostration of strength is experienced by the patient, from which, by degrees, he finally recovers, and again enjoys health.

## TREATMENT.

As there is an increased secretion of acrid bile in cholera morbus, and not only the stomach, but the bowels, in some cases, are almost literally filled with it, it becomes necessary to relieve them from it before anything else can be done, which will give permanent relief. All our first efforts, therefore, should tend to this end. The patient should take freely of some warm diluent

drinks, such as camomile or flax-seed tea, barley or rice-water, and as soon as the stomach is freely and fully washed out, an injection of starch, with a tea spoonful of laudanum, should be given, and the following medicine taken :

*Recipe :* Calomel, twenty grains.  
Camphor, five grains.  
Opium, one grain.

Mix, and give in sugar and a few drops of water. The patient should now take as little fluid on the stomach as possible ; strong toast-water is best, and next to this mint tea, made of the green herb. If the medicine is thrown up, it should be repeated immediately ; or the following may be given :

*Recipe :* Calomel, twenty grains.  
Morphine, one grain.  
Camphor, ten grains.  
Mace, five grains.

Make all fine. Mix well, and divide into four papers. One of these may be given every half hour, or hour, as the case may require, till the stomach is settled. An injection should be given occasionally, of starch, containing fifty or sixty drops of laudanum, till the puking ceases and the griping subsides ; at the same time, a mustard plaster should be applied over the stomach, and remain there till the skin becomes very red. If any erump or coldness of the feet and hands takes place, mustard plasters should be applied to the wrists, feet and legs. As soon as the vomiting ceases, and perfect tranquillity is restored to the stomach and bowels, the patient should be allowed to remain quiet for several hours ; then a full dose of calomel should be again given, and after remaining in the stomach two or three hours, an injection should be given of thin gruel, lard and salt ; and if this does not produce copious operations, a full dose of castor-oil should be given, in hot coffee, or if the stomach will take it better, a tea cupful or two of strong senna tea. All we have to do after the stomach is tranquillized and the first dose of calomel is worked off, is to keep up a gentle action on the bowels till all the aerid bile is removed, and our patient is well again. If much debility remains, some mild tonic should be given, such as Huxham's tincture, or a bitter, of equal parts, of Colombo root and gentian, with a little orange peel in it. In convalescence, great care should be taken not to overload the stomach, and all exciting causes should be avoided. Those persons who are subject to cholera morbus should take great care not to use those articles of diet that are likely to produce this disease.

## SPASMODIC OR ASIATIC CHOLERA.

THIS disease derives its name from the country in which it started as an universal epidemic. It is, however, the diarrhœa serosa of the ancients. We are indebted to the publications in the European medical periodicals, — written by the British surgeons who were in Asia at the time this epidemic broke out there, and their subsequent observations and remarks, and practice upon and in the epidemic, for fifteen years before it reached the continent of America, — for what we have gathered in relation to its history and progress, as well as the route which it took through the eastern world, before it reached Europe and Africa. Having had a full knowledge of their publications, regularly, every few months, for fifteen years, or from its commencement till we became eye-witnesses of it ourselves, as well as subsequently, we are enabled to give a correct history of this dreadful scourge of the human race. We shall only, however, give a brief sketch of its origin and its tracks through the eastern world, as well as our own country, and then a short but plain description of its symptoms and the practical treatment of them, which we deem all that would be necessary in a work of this description.

This epidemic, as such, commenced at a little city called Jessore, on the Ganges, about one hundred miles northeast from Calcutta, in Asia, in August, 1817. From Jessore, it passed down the Ganges to the Coromandel Coast. From thence, it passed over to Siam, where an epidemic had never previously been known to prevail, it being one of the most healthy countries on the globe; and from thence, to the Spice Islands, where frost was never seen, slaying its thousands in its course. At the same time, it travelled up the Ganges, visiting all the towns and cities on its coast, to Delhi; from that city, it branched, and one line took the river Indus, and travelled down to its mouth, to the Arabian Sea; thence down the coast of Malabar, meeting the Coromandel line, and passed over to the little island of Ceylon. Here we leave it, and take up its line of march from the city of Delhi, north. From Delhi, it passed into Siberia, and crossing its high, snow-topped mountains, it slew its hundreds in a day and night, in some of the towns, in the dead of winter, when everything was sealed up with ice, and the traveller could scarcely live for the intensity of the cold. It passed into the interior of Russia,



and down the Irtva, to Tobolsk. It also passed up the Tobal River, to the Ural Mountains; from thence to Lake Aral, or the Sea of Aral, in Tartary, which is 220 miles long, and 150 miles wide. This is the lowest surface on the globe, when compared with the level of the sea, it being far below the sea's surface. This sea is surrounded by a large valley, where the cholera raged for six or seven years, till it almost depopulated that whole country. From this place, it passed to the shores of the Caspian Sea, and, passing around its borders, made its way into Caucasus, in Asia, and from thence to Turkey in Europe, and, passing through Independent Tartary, it entered Arabia and Africa, where we again lose its history and course. But we return to it in Europe. After spreading pretty generally over Europe, and occupying about fifteen years in the eastern world, it took its flight from Gibraltar; and, as if upon the wings of the wind, it made its way to Canada, in North America, and the town of Montreal had first to announce this unwelcome visitor, on the shores of America. From thence, it spread down the canal to Whitehall, and thence to New York. From thence it spread through all the eastern and northern states, more or less, and found its way down the Atlantic coast, through the southern states, to New Orleans. While it was making this tour, it also passed from Canada to our northwestern army, and from thence to the waters of the Mississippi, down to St. Louis, and from thence, down that stream, to the city of New Orleans, and from thence it passed into Texas and Mexico, and we lose its history in South America. It also passed up all the rivers contributory to the Mississippi, to their sources, and visited all the towns and cities, more or less, on their shores; spread out from various points into the countries contiguous thereto, and finally reached almost every state in the Union. It prevailed as an epidemic in Europe and Asia for fifteen years, and as an epidemic in the United States, about three years. Several millions in the world fell victims to it, during its ravages.

It was far more fatal in Asia and Europe than it was in America. Two reasons may be assigned for this; first, the epidemic was more violent in its onset, and so continued for twelve or fourteen years; and, secondly, the physicians in America had the advantage of the published practice of the physicians of the eastern world, and were better prepared to meet it, than those were who had never seen or even heard of it till they were called to treat it, and war against it.

No epidemic, in the annals of medical history, ever travelled as did this epidemic. It would make its appearance in a town or city in one night, and rage with violence for a few days or weeks; then, like a flight of birds, it would escape, and passing over from twenty to a hundred miles of thickly populated country, it would seem to light down on a neighborhood, city or town, and before the citizens were fairly apprized of it, would break out in every quarter and section. It was not an uncommon thing for it to kill from five hundred to a thousand, and, in some cities, ten or fifteen thousand, in less than that number of days; and then disappear suddenly, and not a new case appear. These facts are fully declared in our European periodicals. Its ravages were not so violent, however, in America; yet it was the most formidable epidemic that ever visited our continent. It evidently paid no regard to climate or location, for while it was slaying its thousands in the sunny regions of the Spice Islands, it almost depopulated, in a few days, some of the towns in the cold regions of Siberia and Russia, in the dead of winter, when all nature was under the frigid seal of ice and snow.

This short history of epidemic cholera is sufficient to show that no one common cause could have produced it in all these countries. It could not have been a common miasmata, for those cold regions could not have produced it at that time. It could not have been produced by a small microscopic insect, as some have vainly supposed, for they could not have lived in these cold regions. It did not seem to be influenced by any of the known laws that govern epidemics of other descriptions and character.

We shall not attempt to account for its origin and progress as an epidemic, but suppose it not improbable that it may have been one of the vials of God's wrath, spoken of in the Apocalypse, which was to be poured out upon the earth. Why may not these vials of wrath mean epidemics, as well as wars, etc.? Nor should this prevent the fearful indulgence of the idea that it may again appear; if not as a universal epidemic, as a sporadic disease, in which character it has often appeared since. Nor should this prevent us from using every means in our power to remove or cure it when it does appear. A great mystery lies at the bottom of the causes of these sweeping universal epidemics.

With these remarks, we come to the description of the disease. Spasmodic cholera may be properly divided into four stages. The premonitory stage; the serous diarrhœa, or rice-water dis-

charges; the collapse, and the reaction. The premonitory stage, in most cases, in this country, was marked by a white tongue, languor, or debility, and a looseness of the bowels not amounting to a diarrhœa. The discharge from the bowels, in this stage, may be of various colors. In some instances, this stage lasted for several days. The appetite fails and the person feels weak. The stomach does not digest readily what is taken.

The second stage is marked by the discharges becoming more liquid, and of a soap-suds appearance first, then more milky, and then clear, or like water in which rice had been boiled; hence, they were called rice-water discharges. These discharges are not accompanied with any griping pain; the discharge is thrown off with a noise like that of water drawn from a cask. The urine is diminished in quantity. The voice is hollow and deep, but weak. The features shrink, the eyes look hollow, and the whole surface shrinks and feels cool. This form of discharges may last, in mild cases, for several days; but generally they lasted but a few hours, before the lips and all the extremities became blue, the hands shrivelled, and the whole surface cold. The hands looked as if they had been constantly immersed in warm soap-suds, till they were all shrivelled up, though cold as ice and clay.

The third stage now comes in, with vomiting and cramps in the legs and thighs, hands and arms, the patient often crying out for some person to rub the extremities. The stomach is apt to reject everything that is taken in this stage of the disease. Nothing taken into the stomach becomes warm there, but is ejected as cold or colder than it was when swallowed; and injections are returned in like manner. But excessive vomiting does not occur in all cases. The cramp denotes the state of collapse to be in progress, which is the third stage of the disease. The pulse, up to this time, is weak, and the skin cool; but now, the pulse fails, and is scarcely perceptible for a short time, and then is lost altogether. The skin, from being cool, now becomes icy cold, and the discharges run from the patient involuntarily. He now does not speak unless spoken to, and then he answers rationally. I never saw a delirium in this stage of the disease. The tongue is white and shrivelled, or contracted to less than half its natural size. The pulse, if felt at all, is as soft as a floss thread under the finger. In fact, every symptom shows clearly that all the fluids have been drawn off from the system. The strongest stimulants applied to the surface produce no effect whatever;

even fire will not make a red spot. The patient tosses from side to side, and does not wish to talk; but when he does speak he is rational.

Perhaps forty-nine cases in fifty that reach the third stage, never exhibit the fourth. But the fourth stage does appear in some cases; and when it does, it is marked by a ceasing of the cramp, a return of the pulse, a warmth of the surface, and a low, burning fever, with a rapid circulation, red eyes, and, frequently, low delirium. The watery discharges now cease, and the bowels become constipated. From this stage, the patient, if properly treated, may recover. Cholera often kills in a few hours, and according to the reports in our periodicals, has killed in a few minutes; but, generally speaking, it was not so severe in America. Here it generally lasted from twenty-four to forty-eight hours, and sometimes three days, but rarely so long without recovery.

#### TREATMENT.

The treatment of spasmodic cholera naturally divides itself into as many specifications as there are stages in the disease. The treatment for the premonitory or first stage, therefore, calls our attention first.

*First.* When the epidemic is known to be in the country, and especially in the neighborhood, and a person feels debilitated, with a white tongue, and the bowels rather too loose, the first thing to be done is to take a tea spoonful of the strongest preparation of the spirits of camphor, in a little water;—perhaps a better prescription is the strongest preparation of the essence of camphor, in water, as this article retains the camphor in solution when it is poured into water. Then take twenty grains of *calomel* and one of *opium*, at bedtime; in the morning, take a dose of rhubarb to work it off. If this brings bilious stools, the disease is warded off; if not, repeat it every night, till bilious stools are produced. The diet should be light and the patient should keep calm; fear has killed its thousands. The super-carbonate of soda may be taken, in tea spoonful doses, in water, three or four times a day, with a tea spoonful of the essence of camphor in it. This will neutralize any acid that may be in the stomach or bowels. The camphor and soda will also tend towards the skin and kidneys. The diet should not be much altered from that which the patient has been in the habit of taking, only it should be lessened in quantity, as the powers of digestion are weakened. All crude, unripe fruits, or even fruits of any kind, should be avoided.



Persons that have been in the habit of using spirits should not increase, but rather lessen, the quantity. The surface of the body should be kept uniformly warm, by wearing flannels or silk next to the skin.

We now come to the *second stage*. The second stage is marked by a free discharge of liquid stools at first, like soap-suds; then milky; then almost clear, or like rice-water, without pain or griping. The features and surface shrink; the voice becomes hollow, and the stomach sick, and occasionally the patient pukes. But after the contents of the stomach are discharged, nothing is thrown up but clear water; no bile ever makes its appearance by such vomiting. The skin is still a little warm, and the pulse is tolerably full, but soft.

Now the remedies must be prompt and powerful. If I were here to enumerate all the remedies that have been published by writers on this subject, for this stage of cholera, I might fill twenty pages with them and the directions and reasons therefor. Such a procedure would leave the reader in more difficulty to decide which he should take, than if I had given none at all; I therefore shall only give those that I have found serviceable among them all. Having had nine weeks' experience with it, in 1833, and having had it in my family, and had it myself, I feel that I can give those remedies that will present as fair a prospect for a cure as any others. Immediately on the appearance of the watery discharges, give an emetic of salt and ground mustard, in a glass of warm water; this will puke the patient immediately, and he will afterwards be enabled to retain the following medicine:

*Recipe:* Calomel, sixty grains.  
Pulv. Camphor, fifteen grains.  
Pulv. Opium, six grains.

Mix, and divide into three powders. Give one every thirty minutes, till all are taken; they should be taken in a little brown sugar and a few drops of water. At the same time, occasionally, a tea spoonful of the spirits of camphor should be taken in strong toast-water. Mustard-plasters should be applied all over the stomach and abdomen, and the legs and arms should be wrapped up in them. As little fluid as possible should be taken till the calomel operates. The toast-water will serve for drink and nourishment. Many have recommended piperine and cayenne pepper internally. I have tried them often, but cannot say I ever saw any marked benefit from their use, except when



given in injections. In this form, I have thought the article of some service. I have also seen ice given, in large and in small quantities; it gratifies the patient at the time, but I never knew one recover who took much of it. The calomel, camphor and opium, should be repeated, again and again, till the watery stools are checked, and then, if they do not operate, a dose of castor-oil may be given to start it; but no cessation of the use of this medicine should be allowed, till bilious stools are procured. The best returning signs of success are a warm skin, the absence of cramps, a composed stomach, bilious stools, and a free flow of urine.

*Third stage*, or that of collapse, is marked by a shrivelled skin, especially the hands, with a blue appearance of the fingers and lips, nose and ears, &c.; sometimes they are as blue as if they had been dyed with indigo. The discharges are frequent, and thin as water, and involuntary; the cramps are severe for a while, but presently cease. The surface is as cold as ice and clay, and the pulse imperceptible; the thirst is great, and the vomiting frequent; everything thrown up is as cold as when it was swallowed. The great desire is for cold water, ice-water, or ice itself. The voice fails more and more, and the patient feels disposed to lie stiller, and not speak unless spoken to; he then answers rationally. The patient, in this state, looks like a skeleton; the skin loses its color, and, in some cases, turns brown, and seems as if it would cleave to the bone, especially on the face; the lips are contracted, and will not cover the teeth. The voice is perfectly sepulchral. The cramp now ceases, and it would seem as if the irritability of the nervous system was almost entirely destroyed. All the veins look flat and blue; the thinner fluids of the system have all been drained off.

A multitude of remedies have been prescribed for this stage of the disease, by writers on cholera; and I have no doubt but many of them have been prescribed by men who never saw a case of cholera asphyxia. I have tried, and seen tried, a great many of them, and never saw one that I have seen published do any good. I shall here give but one remedy, which I found by experimenting. I attended a lad, about nine years old, by the name of Buckley, in Newcastle, Kentucky; he was the son of a widow, a lady of good sense and strong nerve. Her son had been collapsed for several hours, when she said to me, "I know he must die in a short time, and I wish you to try some experiments on him." I immediately gave him a tea spoonful

of salt, and as much ground mustard, in a glass of warm water, he retained it. In a few minutes, I gave him another; he presently threw them up. The dose was repeated every few minutes, and as often rejected, till eight or ten glasses had been taken and puked up. The skin began to feel less cold, and the puking was continued to twelve or fifteen times, when the pulse began to be perceptible, the sweating ceased, the shrivelled condition of the skin disappeared, a glow came upon the surface, and the purging stopped. I now ceased to puke him any more. In a few hours the blood started from his gums, and he coughed up strings of dark blood from the lungs. The surface of the stomach and abdomen, and the whole length of the spine that had been freely rubbed with strong spirits of camphor, turpentine and mustard, without reddening it in the least, now became red and generally blistered. The febrile action ran so high that I bled him twice in twelve hours. I now gave him small doses of calomel and tartar emetic, till the fever was subdued, and he was slightly salivated; and by low diet and close attention he recovered. After this, several were recovered from a state of collapse in the same way.

I have omitted to say, that in all stages of cholera, I have used the warm bath. I have bled from the arm and from the feet, in the bath and out of it, but cannot say that I ever saw any benefit derived from these remedies. I have used all forms of cathartics and injections; but few of them seem to avail anything. I have given, in the above treatment, all the remedies that have been of any avail in my hands; and with those remedies I have cured great numbers, as well as witnessed their good effect in the hands of my cotemporary practitioners.

In conclusion, I would say, that in the course of my observations in this epidemic, a great many persons have been frightened into this disease. I therefore would advise those who are fearful, when the cholera appears in the neighborhood, to make their escape to another section of the country, where it does not prevail. From all I have ever been able to observe, I do not believe the cholera is contagious; but after it has prevailed for some time in a small town, and the whole atmosphere becomes loaded with the effluvia of the discharges, persons not accustomed to it should keep away from its influence.

## SCYBALUM.

THIS disease is characterized by hard lumps in the bowels. They are unctuous or soapy concretions, mostly continuous, sometimes in layers, spheroidal or oblong, consisting chiefly of mucus, or oily matter, more or less mixed with hardened fæces. These lumps have often been mistaken for biliary calculi, an error which is apt to occur when they have not been particularly examined. The concretions are numerous, in many cases where the patient is liable to have these formations in the bowels. When, from a feeble peristaltic motion of the bowels, the fæces have remained a long time in them, they are found to undergo a considerable change; for they become harder as their more liquid parts are absorbed; and, in consequence of becoming harder, they stimulate the mucous glands, by which they are surrounded, to a more copious secretion of mucus, which intermixes with them, and as they break into fragments, gives them a less rough or more greasy feeling. These are the common scybala of medical writers. But we occasionally meet with balls, buttons, or globules, of a more fatty or oily substance, discharged, sometimes literally so, sometimes in groups, of very different sizes, from the rectum; and from the pain in the stomach, which often attends them, they are not unfrequently mistaken for gall stones. They are generally in size from that of a small pea to that of a grape, of a cream color, and slightly translucent, and of a sufficient consistence to bear being cut with a knife, like soft wax. We are seldom able to trace these concretions to any unctuous substance taken into the stomach; they, therefore, must be formed by some action in the larger intestines. *Dr. Babington* relates a case in a little girl of four years old, of whom he says, "At the age of three, her mother observed something come from her as she walked across the room, which, when examined, was found to be fat in a liquid state, which concreted when cold; ever since that time, the patient has voided, at intervals of ten or fourteen days, the quantity of from one to three or four ounces, sometimes pure, at other times mixed with fæces. When voided, it has an unusually yellow tinge, and is quite fluid, like oil. Her appetite is good, as well as her spirits, and her flesh is firm; her belly is rather tumid, but not hard; she is subject to occasional griping."

Globules and balls of fat are noticed by various medical wri

ters, both in this country and in Europe. We have an account, in the Edinburgh Medical Essays, of a substance, like tallow or hardened marrow, in a congeries of globules, passing with the fæces, in masses as large as a walnut, and subsequent pieces passing, the size of peas. The Paris Academy of Surgery have published similar accounts. These lumps are of various sizes and colors, from the size of a small nut to that of a hen's egg. Where they have remained for a long time in the bowels, they cause great pain, and colicky symptoms. Costiveness is always more or less an attendant on this disease. Those lumps are found in large masses in the whale, and are what is called ambergris. When found in a whale that has died of the disease, these lumps of ambergris sometimes weigh more than a hundred pounds. They bear a close resemblance to the fæces of the whale, but harden on being exposed to the air. It is probable that the largest lumps are never extracted from the whale, but are found after its death and putrefaction. *Neumann* gives an account of a mass found on the coast of the island of Tidor, that weighed not less than a hundred and eighty pounds. It was purchased of the king of Tidor, by the Dutch East India Company, in 1693, for eleven thousand dollars. "It measured five feet eight inches in thickness." It was long exhibited at Amsterdam, and at length broken up and sold. Other masses, of many pounds' weight, have been found floating on the sea. The concretions thus detached, and of different bulks, are carried into every quarter of the world, by tides and currents, and have sometimes been found on the shores of the West Indies. The whale containing this substance lives in the southern seas. When recent, the smell of ambergris is very strong, and rather fetid; but by keeping, the offensiveness goes off, and it acquires a faint musky odor. It has scarcely any taste. Its color is ash-gray or brown, somewhat mottled; its hardness is sufficient to render it somewhat brittle, but will not bear a polish; when broken down, it has a somewhat soapy feeling.

#### TREATMENT.

The treatment of this disease consists in mild purgatives of the vegetable kind. The following pills, if taken every night for some time will remove them :

*Recipe :* Scammony, forty grains.  
Aloes, forty grains.  
Rhubarb, forty grains.  
Castile Soap, forty grains.  
Tartar Emetic, three grains

Mix well, and form forty pills. From three to four of these pills will, if taken at bedtime, operate two or three times in the morning. These pills should be repeated for some time; then they may be changed for a few doses of *castor-oil*. The patient should be careful not to suffer a costive habit to become established. Those means that are calculated to give general tone to the system, will also tend to remove this condition of the bowels, such as the cold bath by aspersion, or the shower-bath. Some warming vegetable tonics will also assist in the cure, such as :

*Recipe :* Colombo Root, one ounce.  
Gentian Root, one ounce.  
Orange Peel, one ounce.  
Rhubarb Root, one ounce.

Make all fine, and add to them one pint of old spirits and one pint of water. Shake every day for ten days. Then take a table spoonful in water, three times a day. The diet should be such as the stomach will readily and easily digest. Early rising and active exercise will be of great service, especially exercise on horseback. Kneading the abdomen every morning with the fists, for fifteen or twenty minutes, will go very far towards effecting a cure. Quick and active friction over the abdomen, with the open hand, will also be very good in aiding digestion. In this, as well as all other constipated habits of body, a large draught of cold water, taken in the morning immediately after washing, will be good. Also a glass of cool water should be drank every day while dining.

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## COLIC.

THIS disease is distinguished by griping pains in the bowels chiefly about the navel, with vomiting and costiveness. There are various diseases to which this definition will apply, but which, nevertheless, differ in character, in several important particulars, though they bear so close a resemblance to each other as to be properly classed in the same order or family. But for the sake of perspicuity, I shall treat of each member of this family under its appropriate head.

The first species is called the



## ILIAC PASSION, OR SPASMODIC COLIC.

This species is properly defined by griping pain, vomiting, and costiveness, accompanied with retraction of the navel, and spasms of the muscles of the belly. It takes its name from the disease being seated in the ilium, or small intestines. The griping pain, or belly-ache, in this species, is very acute; and the vomiting is accompanied not only with a discharge of bile from the duodenum, but actually of feculent matter from the large intestines, and, in some cases, of the injections that have been thrown into the rectum. So violent is the reverted action of the bowels, that the valve of the colon is forced, by which action the bowels often become folded into themselves, like the finger of a glove folded into itself, while the obstinate costiveness which exists at the same time, clearly indicates a spasmodic constriction; which, however, rarely produces an entire occlusion of that part of the canal where the pain is most severe. The pain often extends to other parts, and even to the gall ducts. Even in this last case, where the fæces are discharged by the mouth, they are rarely tinged with bile, while all the symptoms of jaundice supervene. It is not unfrequently the case that inflammation is excited in that portion of the intestines where the pain is most violent. This aggravates all the other symptoms.

The dissection of persons who have died of this species of colic, has shown, in some cases, that one portion of the bowels, constricted and lessened in its diameter, has fallen into another portion below it, and thus produced what is called intussusception or involution of its coats; but we dare not say that this is the case in every instance of this disease. On the contrary, we have good reasons to believe that it is not, in the less violent forms of the disease. In every case in which the coats of the intestines are weakened, there is a copious extraction of air, producing, in many cases, a great distension of the abdomen. In this species of colic, as we have already observed, there is, in conjunction with this extraction of wind, a strong, inverted peristaltic action operating from the rectum to the stomach, and forcing back every material that is contained in the bowels; these, by intermixing with the elastic vapor contained in the bowels, become very voluminous, and distend it to its utmost range, wherever distension can be accomplished. But there being in some portions of the bowels violent contractions,

through which the distensive force cannot prevail, except by snatches, or during a remission of the spasm, the two powers are hence brought into immediate contact, and while the intestine is rigidly contracted above, it is widened almost to bursting below; and during the struggle, which causes a part of the imprisoned contents of the expanded intestine to be forced upwards, the collapsed portion of the superior intestine slides downwards at the point of the stricture. In the midst of this spasmodic commotion, there is also another very extraordinary change which has been found to take place in the relative position of some parts of the intestinal canal. From the urgency of the moving powers that work upwards, the natural effect of the gravitating power that works downwards, and the looseness of the intestines themselves in many parts, and their tightness from adhesion in others, they have sometimes become twisted into nooses and knots, in which, the portion forming an entire circling cord, a knot has been tied, and drawn so tight as to produce strangulation, and render gangrene or mortification inevitable. In one instance, the strangulation was so complete, and the spasmodic action so extreme, that the bridle not only produced strangulation and gangrene, but actually cut through all the coats of the intestines, on the opposite side to the mesentery, and made an opening about an inch in length. — *Medical Observations.*

The common causes of this disease are acrid, cold, or indigestible substances; cold beverages on a heated stomach; catching cold in the feet, or abdomen; unalimentary substances swallowed through bravado or by mistake, as pieces of glass or pieces of metal; plum, cherry, or other fruit stones; an excessive flow of acrid bile; worms; drastic purgatives in over doses, as of black hellebore or colocynth; calculus or other balls lodged in the intestines, and obstructing their passage, as scybala, bezoars, or indurated or hardened fæces; violent passions or other emotions of the mind, as extreme rage or terror; a contraction of the intestinal canal from scirrhus or cancerous tumors. It is sometimes a consequence of transferred gout, or rheumatism.

#### TREATMENT.

If the patient is stout and full of blood, he should be bled from the arm, all his pulse will bear at the time; then place him in a warm bath, or he may be bled in the warm bath. If the first

bleeding should not give some relief, he may be bled a second, or even a third time, in twenty-four hours. Immediately after the bath and first bleeding, an injection of some warm fluid should be given — say salt and water, or Epsom salts in warm water. This should be immediately followed by a large dose of oil, with a tea spoonful of laudanum in it. By this time, you will have obtained some quietus of the stomach, especially if a large mustard plaster has been applied there. Now you should give ten grains of calomel, with half a grain of opium, every two hours, till the stomach and bowels are freely evacuated, always observing to omit the opium as soon as the vomiting stops. It would be scarcely necessary to say that every other medicine would be thrown up but calomel. A few drops of croton oil may be given with every other dose of the calomel, and a few drops may be rubbed on the stomach. If there are signs of inflammation of the bowels, a large blister may be applied over the abdomen. If the calomel and opium fail to operate, then quicksilver may be given. I once gave an ounce, in such a case, before an operation could be procured; the patient, however, had previously taken, in four days, an ounce and a half of calomel, and had had from twenty to thirty injections, and warm baths, bleedings, &c., all to no purpose. I gave the quicksilver and waited the result. In ten hours it loosened all the knots in the bowels and passed off. The patient recovered, and was but slightly salivated. I have since used hyoseyamus — twenty grains of the extract to a quart of warm water. This relaxed the spasms, and the medicine operated well. This injection should be thrown into the bowels with great force. Some have used cold water, suddenly and forcibly thrown upon the abdomen, and also injected it freely into the bowels. Warm water has also been used in the like manner. The enema pump should be used, so as to fill the bowels completely. Emetics are of doubtful utility in this disease, though there is much vitiated bile discharged by vomiting. Yet we should always attempt to carry it down. Great care should be taken in convalescence to avoid the exciting causes.

#### PAINTERS' COLIC.

The distinguishing marks of this species of colic are dull pains at first, which are remitting, but progressively growing more violent and continued; extending to the back and arms,

and at last producing paralysis. The pain in this species is generally seated at the pit of the stomach, and is apt to remain there; it gradually grows more severe, and as it increases, it extends upwards to the arms, and downwards to the navel, back, loins, rectum and bladder, and frequently to the thighs and legs. From the navel it frequently shoots with so much violence to each side, that the patient feels as if some person was cutting him in two. Almost all the muscles of the body are rendered sore by the violence of the pain, so that the weight of the bed-clothes, or the touch of the finger is not easily borne. Sometimes the pain alternates between the stomach—which it, however, never leaves entirely—and the external muscles. When the muscles and lower bowels are most at ease, the pain is worst in the stomach. Sickness at the stomach, as well as costiveness, is an early symptom; and the sickness at the stomach increases with the pain; even on the second day from the attack, the straining and vomiting are violent. The discharges from the stomach consist of pancreatic liquor and bile, mixed. A momentary relief is generally obtained by vomiting; but as long as the pain continues the same morbid matter will be discharged. The secretions are increased, and the severity of the symptoms also. If the puking, however, should cease while the disease continues, its place is supplied with bitter eructations and hiccoughs. The pulse is generally but little affected at first, and for several days may continue as quiet as in health; but in three or four days it becomes quicker. The urine varies very much in different individuals, so that no stress can be laid on that. Towards the close of the disease, there is generally a pain around the edges of the feet, and at the extremities of the toes, which are often red and swollen, and to appearance gouty. Sometimes sweats break forth, accompanied with an eruption on the skin; at the same time a griping, different from what had been felt before, and which is not so violent, takes place, and now there is a disposition to go to stool, and after large discharges of different kinds of fæces, frequently in hard lumps, and not unlike sheep's-dung, together with black and dirt-colored slime, occasionally mixed with blood, the patient is perfectly relieved. If the disease is mild and well treated, it may be removed in a few days; but if it be violent, neglected, or ill treated, it will continue for weeks, or even months, with now and then an abatement for a few days, and will terminate in a peculiar sort of palsy of the arms and hands, or in death, which

will be preceded by blindness, deafness, delirium, or epileptic fits.

Lead is the remote cause of this species of colic, perhaps in almost every instance; being introduced into the system, either by the mouth, lungs or skin; hence, this disease is chiefly confined to those who work a great deal in lead, as among painters, or grinders, or smelters of this article. In the neighborhood of smelting furnaces, animals of various kinds are subject to this disease. Plumbers, potters, glaziers, workers in glass, gilders, and chemists, as well as miners and painters, are in like manner exposed to its attacks, from the large quantities of lead contained in the materials which they handle. Printers are not exempt from it, if they do not wash their hands clean before they eat. Crude wines and ciders are said occasionally to be the cause of this disease, but, in all probability, it is produced from the lead used in these articles to prevent fermentation, or they are made in materials where lead is freely used. As far as I know, the medical world is indebted to *Sir George Baker* for his critical examination of this subject, and tracing it to its proper source, and exposing the iniquitous fraud of sweetening sour wine and cider with litharge or sugar of lead, and using vessels lined with lead for their manufacturing. Persons once attacked with this disease, are very liable to be attacked again on the application of the exciting cause.

#### TREATMENT.

If the pain be severe, the patient should be bled, and opium injections given, as in the preceding species. Then a large dose of purgative medicine should be administered, before the stomach becomes so sick as to reject it.

*Recipe:* Calomel, thirty grains  
Scammony, twenty grains.  
Jalap, twenty grains.

Form twelve pills. These may be given, four at a time, and repeated every hour, till all are taken. If they should not operate freely, two ounces of castor-oil may be given, and the same quantity repeated every hour, till free evacuations from the bowels are produced. Frequent injections may be used, to aid the medicine in operating. If the pain in the stomach should be severe, opium must be given to relieve it. If the stomach rejects the above medicine, smaller doses of calomel, combined with opium, must be given, till free operations are procured. If free purging is not



obtained before, it will take place when the patient begins to spit freely. After free operations have been procured, the bowels may be kept open by some gentle purgative, as castor-oil, or salts and senna tea. I have been told by lead smelters, that on the first appearance of lead colic, if they can obtain half a pint of bear's oil and drink it off, it removes all the unfavorable symptoms, and operates freely, and cures the disease. No doubt, if taken in time, any other oil that would act freely would do as well. Some men are so fearful of salivation that they cannot be persuaded to take calomel enough to salivate them. But in this disease, where it has become established, it is better to salivate than die. In convalescence, all the exciting causes should be removed from the patient, and he should quit working in lead. Tonics will be proper in convalescence. When the disease terminates in epilepsy, the nitrate of the silver should be given, in doses of from four to five grains, three times a day, for some time; this rarely fails to affect a cure. The diet must be light and thin, and the drinks cool or mucilaginous.

#### WIND COLIC.

This species of colic is characterized by acute pain extending to the pit of the stomach, often impeding respiration; accompanied with great distension of the stomach and bowels, fulness and flatulency; which is partially relieved by pressure or bending the body forward, or the expulsion of wind. This species of colic is often produced by crude, flatulent fruits, and whatever lowers the tone of the stomach and bowels; as too long fasting, fear, or grief, and all the causes of dyspepsia, with which it is often complicated. Its seat seems to be in the small intestines, and, consequently, in the immediate neighborhood of the stomach. It is often accompanied with obstinate costiveness, which runs in a greater or less degree through the whole of the intestinal canal, adding considerably to the torture, and increasing the swelling and tenderness of the abdomen. The last symptom is peculiarly striking and distressing in persons who are hysterical. Such persons are attacked with this complaint from very slight causes; and with them it often produces fainting, or slight spasms of various kinds.

## TREATMENT.

The first object to be attended to is the expulsion of the wind, and, with it, the pains and every other bad symptom will subside. The warm carminatives, such as pepper tea, ginger tea, spirits of camphor, and even hot brandy, have been given, and, in many cases, with immediate relief.

These highly stimulating articles may be used the more freely, because there is no danger of inflammation in this form of colic. All the stimulating teas, such as peppermint, thyme, pennyroyal, etc., have been resorted to, but the following is the most effectual.

*Recipe* : Tincture Asafœtida, two drachms.  
Volatile Tinct. Valerian, two drachms.  
Laudanum, one drachm.

Mix, and give a tea spoonful every ten minutes, in a little water, till the pain is relieved. Then give a full dose of *castor-oil*, or *senna tea with salts* dissolved in it. If the bowels are greatly distended with wind, an injection with warm water and salt will often give speedy relief. If castor-oil is not at hand, any active purgative may be used, such as

*Recipe* : Aloes, ten grains.  
Rhubarb, ten grains.  
Scammony, ten grains.  
Asafœtida, ten grains.

Form eight pills. Give four ; wait an hour, and give the other four. After the bowels are freely evacuated, the patient should be careful, for a few days, not to use heavy food ; care in avoiding the exciting causes, will keep the patient free from another attack. Some mild tonics, where the patient has become subject to colic, will be of great service. The best is the compound tincture of petelea. (See *Materia Medica*.) A tea spoonful may be taken, in water, three times a day, till the stomach and bowels have received their proper tone.

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COSTIVENESS.

THE characteristics of this disease are solid, compact fæces, large and hard. The habit of the subject is firm and rigid. In persons of a compact and robust habit, with hearty appetite and strong digestive powers, the intestinal absorbents occasionally evince an excess of action ; and the fæces, while they become

hardened in consequence of such action, assume the figure of the large intestines through which they pass. The action of the absorbents may be increased by violent exercise, that produces a copious perspiration, which diminishes the fluids that would otherwise be thrown upon the inner surface of the intestines; or the aliment may be dried by such articles as act as astringents. These excite the sphincter muscles of the rectum, and so lay a double foundation for this form of the disease.

Persons who are in the habit of eating heartily of solid food, and taking but little exercise, or fluids, may become costive thereby. In this case, the recrement, too inspissated from the first, gradually becomes more so, by stimulating the absorbents to take up more of the fluids of the bowels, and thus increase the constipation. Bakers' bread that contains alum will cause costiveness, by stimulating the mouths of the absorbents, causing them to take up more fluid, till finally they will become closed themselves, with the secreting vessels. Then the costiveness is almost permanent; for exactly in proportion to the suspended action of the excreting vessels, will be the diminution of the peristaltic motion of the bowels, and the aggravation of the constipated condition of the bowels. This condition of the bowels, with a considerable, or even an inconsiderable, perspiration, will always bring on costiveness. In this condition of the system, the secretion of bile is always diminished, and the bowels lose the natural stimulus of this fluid, and the costiveness is increased thereby. If all these circumstances are combined together, without much diminution of appetite, the accumulation of fæces will be, in some instances, prodigious. The distension of the abdomen from this cause has been mistaken for pregnancy, especially if there be occasional sickness of the stomach, and suppression of the menses, which is apt to attend on this condition of the bowels; and a suppression of the menses will produce a sympathetic enlargement of the breasts. *Dr. Goode* gives a case of this description, "which terminated fatally in about three years from its commencement. After death, the colon, the large intestine, measured more than twenty inches in circumference, and on dissection, was found to contain more than three gallons of fæces." A stricture in any part of the intestinal canal may produce this disease in the same manner that it will constipation in colic; but colic does not always follow, for the bowels are less irritable here than in colic. Intestinal strictures are more common in the large than small intestines, and when they

are in the colon, they exist sometimes without being suspected. *Dr. Baillie* gives the following case: "The patient was a shoemaker, aged thirty years, and subject to habitual costiveness. He became, at length, much more so; and from having motions three or four times a week, he passed them not oftener than once or twice in a week or fortnight; and this, moreover, with considerable pain in the lower part of the belly; and at length was incapable of passing a motion by any means. The real cause of the disease not being very clearly understood, the strongest purgatives were given to him, both by the mouth and in the form of clysters, as five grains of calomel and ten of gamboge, and ten grains of calomel and thirty of jalap, and, at one time, four grains of illaterium, which made him sick, but produced no other effect. Two drachms were given in the form of an injection, and afterwards crude quicksilver by the mouth; shocks of electricity through the abdomen, and the infusion of cold water on the feet. His appetite was but little interfered with, and he passed water freely. A scoop was introduced into the rectum, but this gut was found empty. Under this state of things, the belly swelled gradually, and at length arrived at an immense size, and the patient died in the fifteenth week after the last evacuation. An examination after death showed the real nature of the case, for at the lower end of the sigmoid flexure of the colon, there was a narrow stricture, which would hardly admit the passage of a goosequill, accompanied with an ulcer, which was partly in the situation of the stricture, and partly in the gut above it. This intestine was peculiarly loaded with fæces, and enormously distended, the mean of the transverse diameter being about six inches. All the large intestines, where the distension was considerable, had their muscular coats a good deal strengthened, and the longitudinal bands had become twice as broad and thick as in their natural state. The system thus wonderfully accommodated itself, for many weeks, to circumstances which seemed incompatible with the processes of life."

The effects of constipation, when long continued, are pain in the head, nausea and sickness at the stomach, febrile irritation, general uneasiness in the abdominal region, congestion in the abdominal organs, and hence an impeded circulation of the blood, piles, varicous veins in the lower limbs, and, as we have already seen, colic.

## TREATMENT.

Persons who are subject to costiveness are very culpable to allow such a state of things to continue. At first they should solicit a regular evacuation, at a stated hour, every day. If that should not succeed, they should drink largely of cold water every morning, immediately after washing the hands and face; then use quick and active friction over the abdomen with the hand or a flesh-brush. Should these fail, a tea spoonful of Epsom salts should be drank, in a glass of cold water, before breakfast, or an injection of a pint of cold water may be taken, by a self-syringe, every morning. The bowels should be kneaded for fifteen minutes every morning, or take the following pill at bedtime:

*Recipe:* Aloes, twenty grains.  
Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Ground Ginger, ten grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Two or three of these may be taken at bedtime, every night, till the costive habit is overcome. Any diet or drink may be taken after these pills operate. I have known this pill to be taken for months, to overcome an established constipation, but I never knew it fail to perform a perfect cure. When a regular succession and action of the bowels have been established, the pill may be omitted, by taking only one, or the half of one, at bedtime, and finally omit them altogether. Bitters of various kinds have been prescribed in these cases, but all to no purpose, unless they are strongly impregnated with aloes or rhubarb, and then they are not so good as the above pill. A draught of weak ley, every morning, has been of great service towards overcoming costiveness. A pill of castile soap alone, as large as a bean, taken every night, has effected a cure. Persons subject to costiveness should not sit a great deal. The pores of the skin should be kept open by a cold bath every morning, either by aspersion or shower. The diet should be three fourths vegetable matter, but some fat meats or gravy must be taken; soups are good. All stimulants of every description should be avoided. Well-baked corn bread, light suppers and breakfasts, and active exercise both of body and mind, are the best securities of health.



## TIC DOULOUREUX, OR NERVEACHE OF THE FACE

THIS painful disease is characterized by lancinating pains, shooting from the region of the mouth to the orbit of the eye, often to the ear, and over the cheek, palate and teeth, and fauces; with convulsive twitchings of the adjoining muscles. As the French give the name of tic to lockjaw, they distinguish this species of neuralgia, by the name of tic douloureux, by which term the disease is now chiefly known, both in Europe and America. The name of tic, to this disease, is probably derived from the sound apparently communicated, or from the manner of attack, or shoots of pain, which attend upon it, resembling the sudden sting of some piercing insect. Some suppose that it derived its name from the sound that is produced by the horse biting the manger, which he is constantly doing when he labors under this disease. Horses are very subject to this disease, and it is manifested in them by a constant nipping at the trough, and by sudden starts, throwing up the head while you are driving them, when there is no apparent cause for fright.

By the symptoms by which this complaint is distinguished, it is not difficult to decide concerning both its seat and nature. The character of the pain is very peculiar, and its course corresponds exactly with that of the nerves. The second branch of the fifth pair is probably more frequently affected than those of the first or third, but the portia dura of the seventh pair, which is distributed more extensively over the face, is more frequently the seat of affection than any of the branches of the fifth pair seem to be. When the disease is situated in the seventh pair, there can be no difficulty in deciding concerning it; for the pain commences in the fore part of the cheek, towards the mouth and alia of the nose, sometimes spreading as high as the forehead, and branching off in the direction of the ears. At other times, the forehead, temples, and inner angle of the eye on the side affected, and even the ball of the eye itself, form the chief line of pungent agony, while, from the irritation of the lachrymal gland, the eye weeps involuntarily. In this case, we may reasonably expect the disease to be seated in some portion of the superior maxillary nerve, constituting the second branch of the fifth pair; hence we see that the radiation of the pain will be exactly in the direction of the branches of the nerve affected.

This disease has been sometimes mistaken for rheumatism,

hemigrania, and toothache; yet the brevity of the paroxysm and the pungency of the pang, the absence of inflammation or swelling, the comparative shallowness of its seat, and invariableness of its following the course of the nerves affected, will be always sufficient to distinguish it from any other pain.

This disease is found in the robust as well as in the weak, and in the middle-aged as well as in the old. Its cause would seem to be, in some instances, cold; in others passion, as anger, fear, grief; and in some others deranged menstruation, or a derangement of the digestive apparatus; and in some cases we are not able to trace its origin to any particular cause. It has been supposed, by some able writers on this disease, that it sometimes has its origin at the root of the nerves, rather than in their extremities, which theory has some plausible grounds for its foundation, as we shall see when treating of the neuralgia of the breast and feet.

#### TREATMENT.

The authors that have written on this disease during the last half century, until within a few years past, knew of no remedy that would cure this distressing malady. They used mercury to salivation, arsenic and the various metallic preparations, and all to but little effect. The only remedy that they could apply with any kind of success, was the knife. They divided every branch of nerve that was the seat of pain, and after dividing sometimes ten or a dozen, the patient was permanently relieved. *Laudanum, musk, ether, valerian, iron, zinc, and mercury*, have all been tried, in their various forms and preparations; and, generally speaking, with but little success. The true remedies and method of treating the disease, have been left to the discovery of the last ten years, and mostly, to the last five years. It will be advisable, in every instance, to premise the use of the remedies now to be given, by cleansing the stomach by an emetic; and in some few instances, the disease has been cured by the use of emetics alone, (this is an old remedy.) They, however, to be successful, should be given every other morning for several weeks, and in some cases for months; and between the emetics, small doses of tartar emetic should be given every hour or two, on the intermediate days, so as to carry the patient effectually through an alterative course of tartar emetic. By this means, a few cases have been cured permanently.

But the science of medicine is on the march, and tic douloureux has not been left out of the list of diseases for which new reme-

dies have been found. While writing this chapter, I was called upon by a lady, who had been laboring under, as she supposed, toothache, for several days, for a remedy, without extracting the tooth. After examining the case, I was satisfied it was tic douloureux. The pain was not confined to her teeth, but was situated in the cheek, and along the whole course of the gums, on the right side of the face. The parotid duct was highly stimulated by it, for large mouthfuls of water were constantly ejected. I prescribed an aperient dose of medicine, then followed it by the extract of belladonna, in half grain pills, to be repeated every three or four hours. She took four pills, and the pain ceased. Her vision became imperfect, and continued so for one day and night, so that she could not see how to thread her needle. By the use of another gentle dose of medicine, all the unpleasant symptoms left her. Her vision was as good as ever, and she was perfectly cured of the pain. She had been subject to this pain, frequently, for some months, but has now been clear of it for nine months, (while I now am revising my manuscript.)

I have used the belladonna in several cases, with a similar result, but always have to push it to the point of impairing the vision for the time being, before the pain is removed entirely. *Mr. Norman* has given a case, at the United Hospital, of a patient, aged fifty years. The patient, a female, of a leuco-phlegmatic temperament, much emaciated, had suffered from tic douloureux fourteen years, with a few intermissions. The paroxysms were so severe as to distort the features; they recurred every five or ten minutes, day and night, during the last four months, confining her to bed, by which her health was much impaired. The belladonna was administered internally, to the amount of one sixth of a grain every six hours, during two days, without any particular effect on the disease, but acting as a purgative. It was then combined with quinine as below.

*Recipe:* Extract Belladonna, half grain.  
Sulphate Quinine, three grains.

Form six pills. One was given every four hours. After the sixth dose, she became delirious at night. The pupil of the eye partially dilated, but the paroxysms were reduced to sixteen, and on the following day to three; after which time, she gradually omitted the medicine, and was able to leave her bed, and take full diet, having previously subsisted on fluids. She then wholly omitted her medicine for a week, and having had no return of her distressing malady for ten days, she was dismissed from the

hospital. *Mr. Mortimer* stated that in a case of tic douloureux well known to him, where two grains of the extract of belladonna had been given at once, through mistake, the patient was alarmingly ill for a week, but never suffered from the disease again, though twenty years had since elapsed.

From these facts, we are in possession of undoubted evidence of the great utility of the extract of belladonna in tic douloureux. But it needs some modification of application. It should be given in larger portions than the smaller one here directed,—in the sixth part of a grain dose. The larger ones are too large. We have found from a third to half a grain, given in bad cases, once in four or five hours, is about the proper quantity to be given, watching the symptoms closely; and as soon as any dimness of vision is manifested, the medicine should be omitted, and a gentle purgative given.

The *veratria* is another new remedy, which has been known but a few years. *Dr. Le Calve* cites two cases of this painful disease, which were entirely cured by friction with the *veratrine ointment*. The first was a man employed as inspector of a telegraph, who, having exposed himself for half an hour to a draught of very cold air, was, in a few minutes after, seized with violent pains. They proceeded from the ophthalmic branch, and radiated over the temple. The eye was injected, and there was considerable spasm of the eyelid, and dread of light. At the end of a few hours, after the first friction of the veratrine ointment, the pains ceased with exceeding rapidity, and the patient slept. The pain, however, returned at two o'clock in the afternoon, but yielded in four minutes to the ointment. The ointment was applied, at every return of the pain, for several times, when it finally yielded, and returned no more. The doctor cured another case, equally as bad, by the use of the ointment. The following is his formulary:

*Recipe*: Veratria, ten grains.  
Rancid Lard, half ounce.

Mix perfectly. The ointment should be applied with the end of the finger, which should be carefully washed before it is put about the eyes; if any should get into the eye, it produces the most inveterate inflammation. It, however, may be applied even on the eyebrow, with care, and do no harm to the eye.

*Dr. Berreyne* uses the belladonna in the form of an ointment for neuralgia, as follows:



*Recipe :* Extract Belladonna, half ounce.  
 Pulv. Opium, forty grains.  
 Hog's Lard, half ounce.  
 Oil of Thyme, six drops.

Mix them perfectly. A portion of this ointment, as large as a hazlenut, is to be rubbed upon the affected part, two or three times a day, or whenever the paroxysm of pain is severe. The rubbing should be continued for eight or ten minutes at each time, or until the ointment is quite absorbed by the skin; a little saliva may be added, now and then, to promote the absorption. If the sight become affected, the use of this ointment should be immediately suspended; or if the head should be affected by pain, it must be omitted. In every obstinate case, the doctor conjoins the internal administration of the extract of belladonna or opium, with the use of the above pomade. But, in the majority of instances, this is unnecessary, as the pain will very generally yield to the external application. He applies it especially against facial neuralgia, and other local painful affections of a nervous character.—*Med. Chir. Review.*

*Dr. Hunt's* treatment for tic douloureux, as found in the *British and Foreign Medical Review*, for 1844, is as follows: For many years, Dr. Hunt has made it a general practice in these cases, to begin with an emetic. If the paroxysms are regularly intermittent, the emetic should be given an hour before the fit comes on. After the emetic, he gives twenty grains of *rhubarb* and twenty of the *sulphate of potash*, with thirty drops of *sal volatile*, in *mint-water*. After this, a course of arsenic, combining it with a few grains of carbonate of potash, if there is an acid stomach. He begins with four drops, three times a day, of *Fowler's solution*, with eight drops of the compound tincture of camphor, gradually increasing the dose of the solution of arsenic, till there is some decided symptom of its action, which is commonly manifested by the time the dose is increased to ten drops—(this is known by sickness at the stomach.) When the pain has considerably decreased, he discontinues the medicine for a few days, and then recommences with the original small dose,—four drops. He has rarely found it necessary to increase them, but continues that quantity for several weeks, if not months, after the pain is removed; for patients should be strictly cautioned against the error of thinking themselves cured, as soon as the pain is relieved. They must persist in the use of the medicine and diet, till the tone of the stomach is quite restored, or the pain will return



The susceptibility of different stomachs towards this remedy is various; in some cases, it must be given on a full stomach. If the pain at any time increases, the purgative must be repeated, and the quantity of the arsenic increased; during the whole treatment, an occasional purgative is useful. When the pain is relieved and the stomach improved, the substitution of a grain of quinine, three times a day, will be useful, although it would have disagreed at first. The arsenic may disagree with the patient, immediately producing an indescribable sensation of distress in the stomach, dryness of the fauces, white tongue, and other symptoms of gastritis. It should then be discontinued, and as this morbid sensibility is probably accompanied with slight inflammation of the mucous membrane, a rigidly farinaceous diet should be enjoined. It should be in small quantities, and lukewarm, with small doses of saltpetre, combined with two or three drops of Scheele's prussic acid, three or four times a day; and three or four grains of James' powder, at bedtime. If aperients are needed, a little castor-oil may be given; a mustard plaster to the stomach, or some stimulating liniment, or a blister, will be good. After a few weeks of this treatment, the arsenic may be borne. It should, at first, be given at or just after meals, and if it again disagrees, it should be abandoned altogether.

The attention to diet in all cases of neuralgia from dyspepsia, is most important. In case of extreme sensitiveness of the stomach, the mildest food is sometimes necessary. Such patients should live entirely on a diet made of meal or flour, or some farinaceous roots, until the nerves of the stomach become less sensitive; which is known by the tongue becoming cleaner, and the general feelings returning to those of health. When the stomach has become thus improved, some animal food should be added to the diet,—beef tea, or a chicken,—prepared thus: A chicken to be wrapped in muslin and stewed for twelve or fourteen hours, with half an ounce of vermicelli, and a few whole peppercorns, until the whole has become a jelly. Some of this, diluted, if necessary, with a little toast, forms a very easily digested meal. As the appetite improves, a slice of game, with soft toast, may be taken. In such stomachs, every kind of food has a tendency to become acid, which in some measure may be prevented by a slight stimulus, with or after meals; a little weak brandy and water, or a tea spoonful of *sal volatile* in a glass of water, or a cup of coffee, will often give temporary relief. For those less sensitive, or whose morbid sensibility has

been quieted, a plain, nutritious diet of animal food, such as game, mutton, or venison, is best, or a good beef steak, with stale bread or toast, and pudding of rice, bread, or tapioca. All pastry, rich pudding, fruit, new vegetables, pickles, cheese, and various sauces, must be avoided. Errors in quantity may be prevented by two rules: *first*, to live simply, and avoid too many dishes; *second*, to eat slowly, that the first indications that sufficient food has been taken may be felt and obeyed. Water, in all cases, is the best drink. Some, who have indulged in the pernicious practice of taking a little wine every day, must still have a little, in order to digest at all; but this must be gradually left off, till none be taken either at or before meals. Those who can eat bacon may use it, though it should be toasted after being boiled; but no fresh pork or pig should be taken.

#### TIC DOULOUREUX FROM ANEMIA.

This name is applied to the disease where there is no local cause of irritation to account for the pain, nor the neuralgic habit, but where persons, naturally of a strong constitution, have a pallid skin, loss of strength, and symptoms indicating a deficiency both in the quantity and quality of the blood. It is in this class of cases that iron is so beneficial, continued unremittedly for months, till there is evidence that there is pure red blood in the system. But in those cases where the attacks are severe, half a grain of belladonna may be given, and will be found serviceable in allaying the general irritation of the system, as well as in checking the pain.

Sometimes tic douloureux has its seat in the spinal marrow. *Dr. Hunt* says he had three or four cases of obstinate *tic*, which resisted all the usual remedies; but some symptoms, such as loss of power in the legs, led to an examination of the spine, when much tenderness was discovered on pressing some of the vertebra (or joints.) Caustic issues were applied, and the recumbent posture enjoined, with complete relief to the *tic*, and restoration or general improvement to the system. The duration of this treatment will vary from a longer to a shorter time; and in these cases, the connection between the disease in the spine and the pain in the face could not be doubted. I have seen such cases, and have cured them by repeated blistering and the use of the veratrine ointment to the spine, together with the continued use of the best preparations of iron.

Tic douloureux, proceeding from depraved menstruation, will generally subside upon a regular and healthy established action of the uterus. (See *Depraved Menstruation*, &c.) The state of the teeth should be carefully examined, in *tic*, at a time when there is no pain. If there are any carious teeth that can be saved, they should be carefully plugged, and if there are any stumps or roots, they should be carefully removed. Great care should be taken to prevent a return of the disease.

*Aconite* is another remedy, which has been used with great success in the cure of tic douloureux. It is used in the form of a tincture. One drachm of the tincture must be applied with a small mop immediately over the painful part, care being taken to have it all absorbed by the process of slowly rubbing it on. The pain will generally subside by the time the drachm is absorbed. If the pain should return, the medicine should be reäpplied. It is not an uncommon thing for the sight to be dimmed for several hours after the operation of the aconite, if it be applied near the eye, but it will disappear in a few hours, and the vision will be as perfect as ever, and in some cases more so, especially if the painful nerve has had any connection or influence with, or over, the retina. The tincture of aconite should be prepared from the root. A saturated tincture should always be used. If the operator should use his finger in making the application of this tincture, it would produce a numb sensation in the finger, that would last for some hours, so powerful is the narcotic effect of this medicine. The tincture of aconite is not only an excellent remedy in *tic*, but also in removing nervous pains of other descriptions, as sciatica. It should not be taken internally. Nervous patients should be careful to keep their bowels in a healthy condition.

There is one more remedy that I will name before I leave this subject, and that is the extract of tobacco. One drachm may be dissolved in two ounces of water, and by friction, applied with a mop over the painful part. This is said to cure in a few moments, and the tic never to return again. I have not used it, but it is highly recommended in the last Retrospect, and, no doubt, is a valuable remedy.

## NERVEACHE OF THE FOOT.

THIS species of nervous disease is characterized by racking and lancinating pains ranging about the heel, and tremulously shooting in every direction—towards the ankle, and down towards the toes, and even into the toes. This is the neuralgic plantaris of some authors. *Dr. Marino*, of Piedmont, was long subject to this disease. It often commences in early life, and in advanced years it becomes less severe. It is apt to alternate with other nervous affections. In the doctor's case, above cited, it ultimately terminated in asthma. It is by no means necessary that the constitution should be broken down, in order to the appearance of this disease, for it attacks the most healthy and robust constitutions sometimes. If let alone, it will continue for many years with unremitted violence. *Dr. Goode* relates a case of a clergyman, who suffered so severely with this disease that he was frequently obliged to stop short in the middle of a sermon, when the pains would attack him. They would shoot up the leg, along the calf, to near the neck, and down to the toes. He described it by comparing it "to scalding verjuice poured over a naked wound." All the skill of that day was tried, without giving relief, and he was obliged to abandon the pulpit for several years. Ultimately, the pain seemed to wear itself away, and he resumed his place in the ministry.

## TREATMENT.

In every instance, the secreting organs of the system must be put in a good condition, and if the patient is of a full habit, he should be bled from the arm. Then the belladonna should be given, as in *tic douloureux*, (which see;) or the aconite may be rubbed in over the affected part, as in *tic*; or the extract of tobacco may be used, as there directed. The wine of colchicum should be given, in forty or fifty drop doses, three times a day, till the bowels are freely purged by it; or the tincture of the *racemosa*, or rattle-root, may be given instead of the colchicum, in similar doses. If the patient is of a leuco-phlegmatic habit, and, withal, inclined to be dyspeptic, the cure will most likely be effected by the use of arsenic, as recommended in the *tic douloureux* of the dyspeptics. By following the treatment there prescribed, all the effects of that remedy will be obtained. In most

cases, a bandage tightly drawn around the leg, beginning at the toes, will alleviate the pain more or less.

Amputation has been performed for the cure of this disease, but it never should be resorted to, for these plain reasons: *First*, the nerve may be affected above the point of amputation, and, *secondly*, the seat of the disease may be at the root of the nerve, and only manifested in its extremity; as the worm in the root of the tree is first shown by a yellow leaf on the point of the twig. Amputation cannot present any prospect for a cure.

The above remedies, with a proper diet, will cure the disease and restore the patient to perfect health.

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## NERVEACHE OF THE BREAST.

THIS disease of the nerves is characterized by sharp, lancinating pains, diverging from a fixed point in the breast, and shooting equally down the course of the ribs and of the arm to the elbow,—the breast retaining its natural size, complexion, and softness. Young ladies are more subject to this disease than elderly ladies are; but both may be affected with it. The pains in the commencement of this disease, come on once in a week or two. The attack is quick, like the incision of a small, sharp instrument. It may last but a few minutes, or it may last much longer; when there is no pain present, the breast will bear pressure; but when the pain attacks it, the breast becomes acutely sensitive, and pressure cannot be borne, so sensitive is the whole organ. The paroxysms continue to return more frequently, till they come on every day, and finally every hour, or every few minutes, in some cases. They do not generally last long. As the disease progresses, the pain extends from the point of its first attack, down the ribs, on the affected side, and up the arm-pit, and from thence down the arm to the elbow. The pain is so acute, sometimes, that the patient becomes faint for a few minutes. The twitches or snatches of pain are so severe, sometimes, as to induce the patient to think that something alive is gnawing the parts internally. Though the pain may not reach lower than the elbow, yet a considerable trepidation of the nerves is felt, even down to the fingers. This disease does not interrupt menstruation; all the functions of the uterus may be healthy.



All the authors that I have been able to see on this subject, regard this disease as a species of nondescript neuralgia, not being able to account for it. It has fallen to my lot to see a number of these cases. I have seen them in men as well as women; but most commonly in females. I saw a case of this disease in a young lady, nearly thirty years ago, whose breast had been literally scared and skinned by blisters, without affording any relief. On a close examination of the symptoms, and hearing a full history of the disease, and the treatment which had been used, I came to the conclusion that the disease had not its seat where the pain was felt,—that is, it was not in the extremities of the nerves. Reflecting on the subject, this analogical thought came into my mind,—that a worm at the root of a tree first showed its deleterious effects in the leaves, on the extremities of the branches, which began to turn yellow first, then the twigs decayed, and finally the tree died. I immediately examined the spinous processes of the back, and found several tender joints between the shoulders; and, on firm pressure there, the pain which was produced could be traced through all the branches of the nerves that had their origin in that portion of the spinal cord, and the pain in the breast was very acute. I pronounced it as my opinion, that the disease was in the roots of the nerves, and not in the breast, and that it was curable. She said her case had often been pronounced curable, but that the remedies hitherto had failed to accomplish what her physicians had anticipated, although her spine had never been thus examined before. The treatment proved my conjectures to be true.

#### TREATMENT.

When the pain manifests itself in the breast or mamma, and no swelling or tenderness or hardness is perceptible in the absence of the pain, we should immediately examine the joints of the back. The patient's clothes should all be loosened, and she should lie down on her face, and pressure should be made on every process of the back, with the thumb and finger, one on each side of the spine, and then immediately on it; and every joint must be examined in this way. As soon as you press upon the diseased part, the pain will be acute, and shoot to every branch of the nerve that has its origin from that portion of the spinal marrow. The disease in the nerve is generally in the ganglion, that lies between the layers of the spinal column. As soon as you have ascertained the number of tender joints on the

back, you may be satisfied that you are capable of covering all the ground affected. It is a great point gained to ascertain exactly where the enemy lies in ambush. Your first effort now should be to act gently, but efficiently, on the secreting organs, and put them all in good order; for which purpose you may give the following medicine:

*Recipe:* Blue Mass, twenty grains.  
Rhubarb, ten grains.  
Aloes, ten grains.

Form eight pills. Give four first, and the other four in two or three hours, when they have operated well. If the patient is fleshy, and of a full habit, ten or fifteen ounces of blood should be taken from the arm. A blister plaster, three inches wide and long enough to cover all the tender joints, should be applied over the spine. The blister should draw deep and full, and when it has ceased to run and healed up, it should be reäpplied, even to the third or fourth time. After this, the veratria ointment should be applied freely, over the same surface; the ointment should be made in the following manner:

*Recipe:* Veratria, fifteen grains.  
Rancid Lard, one ounce.

Mix thoroughly. A portion of this ointment, as large as a hazlenut, should be rubbed in on the part, morning and evening, for two or three weeks. The ointment will produce a stinging sensation every time it is applied, but will produce no eruption on the skin. While these remedies are in use, the bowels should be kept open, and the following preparation of iron used. The citrated aromatic wine of iron. A tea spoonful of this medicine should be taken, in sweetened water, three times a day; or the following pill may be given in its stead:

*Recipe:* Prepared Copperas, two hundred and forty grains.  
Pulverized Borax, one hundred and twenty grains.  
Iodide of Potash, sixty grains.

Make all fine, and, with a sufficient quantity of the conserve of roses, form one hundred and twenty pills. Commence with one three times a day; and in two or three days, take two at bedtime, and one morning and noon; and in a few days more, take two at noon; and in a few days more, take two, morning, noon, and night. Continue these internally, and the ointment to the back, till the disease disappears; or you may, after a week's application of the ointment, use the tincture of aconite on the spine, a tea spoonful at each rubbing, once a day, for a few days.

After the pain and tenderness has left the spine, the pills should be continued for a month, in order to confirm the cure. All the time, the bowels should be kept open with the following pill :

*Recipe* : Scammony, forty grains.  
Aloes, forty grains.  
Rhubarb, forty grains.  
Castile Soap, forty grains.  
Ground Ginger, twenty grains.  
Tartar Emetic, four grains.

Mix, and form forty-eight pills. Two or more of these pills should be taken every night, at bedtime, so as to give one motion in the morning. The diet should be light, but nourishing,—light meats and vegetables. The cold bath should be taken for a few weeks, after you cease taking medicine.

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## WRY NECK—CRICK IN THE NECK.

THIS disease is characterized by the permanent contraction of the flexor muscles of the neck, on one side, drawing the head permanently in the same direction. It is generally caused by debility, or cold, affecting the mastoid muscles on one side of the neck. It may be produced by lying with the head too high, and the neck being on a twist with the shoulders. It is developed by an excess of muscular action. But we frequently meet with this affection from two other causes : one is where there is a disparity in the length of the muscles opposed to each other, and, consequently, a permanent contraction on the side on which they are the shortest, producing the disease called the wry neck ; and the other, from a relaxation of the muscles on one side, permitting the opposite muscles to draw the neck to that side.

### TREATMENT.

Where this disease is produced by cold, or a strain, if the patient is full of blood, he should be bled from the arm, and a gentle purgative given. The parts should also be bathed with warm water, or some stimulating liniment should be applied by free, brisk friction. The following liniment will be good :

*Recipe* : Spirits Camphor,  
Spirits Turpentine,  
Olive Oil,  
Spirits Hartshorn,  
Laudanum, — of each equal parts.

Mix, and shake the vial well. This should be freely rubbed on the parts, and a silk handkerchief or a flannel warmed and applied over it. This may be repeated frequently, till the pain ceases.

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## CRAMP.

THIS disease manifests itself by a sudden and rigid contraction of one or more of the muscles of the body or limbs, but mostly of the stomach and extremities, vehemently painful, but of short duration. The parts chiefly attacked with cramp are the calves of the legs, the neck, and the stomach; though the back and bowels are not exempt from it.

The common causes are, sudden exposure to cold, drinking cold liquids while the system is greatly heated, catching cold, eating indigestible fruits when the stomach is weak and incapable of digesting them, and the excitement of transferred gout, or overstraining the muscles of the limbs,—in which last case it is an excess of reëction, produced by the stimulus of too great exertion. Persons of irritable habits are more subject to cramp than those of an opposite temperament. Cramp is apt to occur during the relaxation which is produced by warmth in the bed, and particularly towards morning, when both the relaxation and the accumulation of the sensorial power of irritation are greatest, and the extensor muscles of the legs are strained to their utmost length, to balance the action which the flexor muscles have gained over them during sleep. Cold night air is a common cause of cramp, and it is a still more common attendant on swimming, in which we have the two causes united, of cold and great muscular exertion. An uneasy position of the muscles is also, in many cases, a sufficient cause of irritation, and hence we very frequently meet with painful cases of cramp in pregnant women. Where the hollow or membraneous muscles are affected, they feel as though they were puckered and drawn to a point; the pain is agonizing, and frequently produces profuse perspiration. If the stomach be the affected organ, the diaphragm associates in the constriction, and the breathing is short and distressing. If the more fleshy muscles be the seat of the cramp, they seem to be withered, and twisted into a hard knot, which is perceptible to the touch, accompanied with great soreness, which continues for a long time after the balance of power has been restored.

## TREATMENT.

In common cases, where the calves of the legs are affected, an excitement of the distressed muscles into their usual action will be found sufficient; hence the relief which is suddenly obtained by rising into an erect posture, or by forcibly stretching out the leg, and maintaining that position for some time, till the appropriate muscles have obtained their counter influence. Sometimes seizing the muscle that is cramped, and holding it firmly in the hand for a few minutes, will remove the spasm; or rubbing the muscle forcibly with the hand, having some warm, stimulating substance in it, as spirits of camphor, or strong Cologne water; or taking hold of any solid substance, and griping it firmly for some time, will often relieve a cramp in some foreign muscle. Where the stomach is affected, we must use internal remedies, as the following:

*Recipe:* Vitriolated Ether, two drachms.  
Tincture of Castor, two drachms.  
Laudanum, one drachm.

Mix. Give a tea spoonful in water, or some warm tea, every ten minutes, till relief is obtained. Stimulating draughts are frequently given, as strong ginger tea, pepper tea, hot brandy and water, &c. The tincture of asafœtida, in tea spoonful doses, is good. A mustard plaster applied to the region of the stomach will be found servicable in protracted cases. The bowels should always be attended to, and some purgative given, as soon as the violence of the symptoms is over, after an attack of cramp in the stomach. If the stomach be affected with gout, opium and rhubarb, or some aromatic, should be taken at bedtime. The best preventives, in constitutional dispositions, to cramp, will be found in some warm tonic, such as those composed of gentian, orange peel, columbo, ginger, and cardamon seeds, of which, when properly prepared in spirits, a table spoonful should be taken three times a day. The bowels may be kept open with the following pill:

*Recipe:* Gum Fœtida, twenty grains.  
Aloes, twenty grains.  
Rhubarb, twenty grains.  
Gum Myrrh, twenty grains.

Form twenty pills. Three or four of these, taken at bedtime, will remove costiveness, and afford a surety against future attacks. Cramp is also one of the severest symptoms in colic, and cholera spasmodica, under which heads the appropriate rem-



edies will be found. Persons subject to cramp in the legs should not allow themselves to lie long in one position, but should change it frequently, so as to relieve the muscles and prevent too great an accumulation of excitability in the flexor muscles. The cold bath, which in itself is one of the greatest luxuries in life, if taken every morning, will effectually prevent cramp in the legs.

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## LOCKJAW AND TETANUS.

THIS awful disease is known by a permanent and rigid fixation of the muscles of the lower jaw; also a permanent and rigid fixation of many or all the muscles of voluntary motion, with incurvation of the body, and difficulty of breathing, and swallowing.

Lock-jaw and tetanus are found in almost all climates. All ages, sexes and temperaments are subject to it. It occurs, however, far more frequently in hot than in cold climates. The middle aged are most subject to the disease, and men more so than women, and the robust and vigorous than the weakly; but all ages and both sexes are liable to be attacked by it, if the exciting cause be applied, and the system is in a proper state of susceptibility for it. Other animals are subject to the complaint as well as man; horses, particularly. Dr. Cullin says, "Parrots are subject to it." The causes are damp and chilliness operating upon the body when heated; hence, sudden vicissitudes from heat to cold will produce it, as well as wounds, punctures, lacerations, or other irritations of the nerves, in any part of the body. It has not unfrequently followed venesection, when unskillfully performed, and still more frequently on amputation. It also results from worms, or other acrimony in the stomach, and especially in those of infants.

We have, therefore, the three following varieties, which, however, chiefly differ in symptoms peculiar to the period of life in which the disease is most disposed to show itself, or in the interval between the casual excitement and the manifestation of the disease. The first of these irritations is that which attacks infants within the first fortnight after birth, and is generally produced by a portion of meconium being retained, or from irritation proceeding from the navel. This we have treated of in its proper place, and shall not repeat it again here. The second

variety is that which proceeds from cold and damp, especially the evening dew, the symptoms usually occurring within two or three days. All ages are liable to this variety. The third variety is produced, or is caused by, a wound, puncture, strain, fracture, etc., chiefly in hot climates, and rarely appearing till a fortnight after the local affection has taken place.

The physiology of tetanus and lockjaw is extremely difficult and mysterious, and has been purposely avoided by most writers on the subject. There is one principle, however, that I shall venture to lay down, which will, perhaps, throw some light on this difficult question, and that is, the sympathy which prevails throughout the whole nervous system, between even the most remote organs of the body. And these sympathetic actions are always manifested at the extremities of the concentrated action; so that, if a morbid action is set up at one extremity of a nerve, the sensation will be first communicated to its centre, whether that centre be the brain or a ganglion; and from that centre to the extremity where spastic action is first set up, and from which the dangerous action radiates. For example; if you irritate the fauces with a feather, the stomach and diaphragm will be aroused to a spasmodic action, and vomiting will be the consequence. Again; when the ilium is irritated, in what is called the iliac passion, the same effect is produced on the stomach, and œsophagus; and, at the same time, the other end of the extremity is affected with a violent spasm; while, in cholera morbus and spasmodic cholera, both extremities are attacked in the same way, and, consequently, we here have both puking and purging. In one species of marasmus, the disease seems to commence in the digestive, and in another in the assimilating organs, constituting the extreme ends of a very long and complicated train of action. It very generally happens, that, at which end soever the decay commences, the other is very soon equally affected. If a long muscle be injured in any part of its fibrous belly, the extremity or tendinous portion is the seat of suffering. So, if a nerve be diseased in its ganglion, where it passes through the lamina of the spine, the pain is felt at the extremity of that nerve. If you strike the elbow-joint against a hard substance, and bruise or press the ulnar nerve, at that condyle, the sensation of tingling, or pain, or numbness, is felt at the extremities of the fingers, and especially the little finger. Hence we see, that, in a continuous chain of nervous action, this principle of sympathy, which induces remote parts, and particularly remote extremities, to associate in

the same morbid action, is fully established. We might give many more examples to prove the truth of our position, but as we are not engaged in writing theories, but plain and practical facts, we shall not prosecute our inquiries in relation to this subject any further, but proceed to the

#### TREATMENT.

Of all the diseases to which the human family are subject, lockjaw and tetanus are the most difficult to cure. And perhaps I cannot do better than to cite a few cases from the late medical periodicals, on the treatment of this disease. To enumerate the old remedies, or even any of those which have been used longer ago than a few years, would be to occupy time and space to no purpose; for at least nineteen twentieths who were treated under the old plan, died. It must be acknowledged, however, that some of the old writers have suggested the use of some of the new remedies, but had not the courage to carry them into practice sufficiently to know what the results would be. Later practitioners, however, with more courage, have pushed them to the ultimatum, and ascertained all the results that could follow.

The first case I shall give, is one cured by the use of tobacco, by H. Bullock, Esq., of Uxbridge. *George Clark*, aged thirty-three years, a healthy laborer, of tolerably regular habits, was admitted as a patient to the Uxbridge Dispensary, laboring under the symptoms of tetanus, on Thursday, the 13th of May. "Upon entering his apartment," says Dr. Bullock, "I found him lying in a state of episthotonus, with his countenance peculiarly characteristic of the disease; the paroxysms occurring about once in three minutes, when the pain was most agonizing, whilst, during the interval even, the muscular rigidity was intense, the perspiration profuse, and the function of swallowing was performed with the utmost difficulty, and never without producing a spasm. The history of the case, as obtained from the patient and his wife, is, that six weeks ago he received a blow on his left side, between the lower ribs and the top of the hip, and that he has had pain in that part of the body ever since, though not sufficient to incapacitate him for his ordinary labor until two days before I saw him; when he complained of stiff neck and sore throat, with almost an entire inability to swallow; which symptoms have increased up to the present time. His pulse is eighty, and regular. Firm pressure over the seat of the injury

creates no further pain than when applied to any other portion of the abdominal muscles, which always has the effect of exciting a spasm; nor is there any perceptible fulness there. The trismus, or lockjaw, admits of the separation of the jaws to the extent of about the third of an inch; his respiration is hurried, and he describes a constant and severe pain in the site of the diaphragm, extending from the ensiform cartilage to the spine. I now prescribed:

*Recipe:* Calomel, five grains.  
Comp. Ext. Colocynth, five grains.  
Croton Oil, one drop.

"Form two pills; to be taken immediately. The following injection was immediately used:

*Recipe:* Tobacco Leaves, half ounce.  
Boiling Water, nine ounces.

"Macerate for a quarter of an hour, and strain. Then ordered it to be used immediately. *Evening.* The remedies have had the desired effect of removing from the bowels large, black and scybalous evacuations. There had been no collapse peculiar to tobacco, and the man's suffering appeared to be rather increased than alleviated, since my last visit in the morning. I then ordered the tobacco injection to be repeated every six hours, and the following medicine:

*Recipe:* Sulphate Quinine, two grains.  
Sulphate Iron, two grains.  
Sulphate Zinc, two grains.  
Elixir Vitriol, five drops.

"Mix, for a dose, and to be repeated every three hours. He was also to take brandy, in arrowroot, and strong beef tea. I will not render the case wearisome by detailing symptoms from day to day, varying from better to worse, and *vice versa*; but will now only give the general outline. The above plan having been rigidly adhered to for three days, the patient had very materially improved; the paroxysms, occurring about every twenty minutes, becoming shorter in duration, and less in severity. There is great permanent rigidity of the whole muscular system. The lockjaw has so much abated that the first joint of the finger can be easily admitted into the mouth; but the back is extremely bowed upwards. The patient's countenance has very much improved; his perspiration is lessened; his breathing is not so much oppressed; and he is now able to sleep for half an hour at a time. His pulse remains the same, except at the period of a paroxysm, when it becomes disturbed; however, this shortly subsides. The tobacco now produces the general symptoms of

prostration, every time it is administered, which last about two hours; and this has been the case in every instance, except the first three, which seemed to have no sensible effect. The tobacco was now omitted, and he was to continue the tonic, with half a pint of brandy, every day, and the following pill to be taken every other night:

*Recipe*: Calomel, five grains.  
Extract Colocynth, five grains.

"Form two pills. To be given every other night. *Fifth day.* Since the last report of the third day, all the symptoms have returned, in a more aggravated form than previously, the jaws being perfectly locked, and the pulse quick and feeble. Notwithstanding this depressed state of the circulation, the tobacco injections were again ordered to be used every eight hours; and after the first two, he began to improve. If, from any circumstance, a larger interval was allowed to elapse, the spasms and profuse perspiration immediately increased. This treatment, omitting the pills, was rigidly persevered in for four days, without intermission, and with the best effect. Then the tobacco was discontinued gradually. *Twelfth day.* He is now very much better. There is scarcely any spasm, and he is able to open his mouth without restraint. He was desired to continue his medicine three times a day, with the *calomel* and *colocynth* every other day; to take port wine daily, one pint, with ale and mutton chops. *Twenty-first day.* The man is quite well, and able to walk out, merely suffering from debility."

It will appear obvious, when we review this case, that the tobacco was the principal agent in the cure; for when it was omitted, the patient immediately became worse, and on its resumption, he in due time began to mend, and continued to do so, till the violent and dangerous symptoms were removed. 1841.

It may be profitable to give a few more cases in detail, and the results obtained by a different mode of practice. The following case is interesting, as well as the treatment new. It is given by *Dr. P. J. Bandry*, of Cuba. In this case, a small splinter, three quarters of an inch long, and as thick as a pin, was driven under the integuments of the thigh, between the sartorius and triceps adductor muscles. In eight days the patient began to feel uneasy about his jaws, and the rigidity of tetanus began rapidly to succeed; and about eighteen days after the injury, the disease was rapidly advancing to a fatal termination; on which day, all the bad symptoms were rapidly increased. The patient can no



longer pass his urine; he can scarcely open his jaws at all. The spasms are stronger and more frequent; he has had no stool; considerable anxiety of countenance. He swallows with the greatest difficulty, and with excruciating pain. The wound was immediately dilated freely, — (the splinter had been extracted only a few days before by his physician,) — the actual cautery (burning) applied to it, and hot emollient cataplasms ordered to be kept over it; an injection of oil of sweet almonds and molasses, and castile soap, in which a clove or two of garlic had been bruised, to be given immediately, and repeated every four hours, till morning; frictions with hot oil and bruised garlic over the abdomen and throat, and cataplasms of tobacco over the pubic region, in order to overcome the spasms of the sphincter of the bladder. I ordered him, for the next morning, a pill of the subnitrate of mercury, — a medicine of much power and much used in that country, (to which, I believe, its use is almost entirely confined.) It is powerfully emetic, cathartic, and diuretic; and its effects in traumatic tetanus are often wonderful; altogether, it is a medicine possessed of so much important power as to merit much attention. It is an empirical remedy; but one which deserves to be tried by the profession. *Dr. Bandry* ordered frictions with hot oil, (in which should be dissolved nitrate of mercury, one grain to the ounce,) to the abdomen, thighs, knees, neck, jaws, and inside of the shoulders, to be repeated every three or four hours, and lukewarm water, with a few drops of spirits of nitrous ether, for a drink. Saw him about 1, P. M. The nitrate of mercury produced copious vomiting, and four or five large evacuations from the bowels. He has passed his urine without much difficulty, and in large quantities; is perspiring pretty freely; belly much softer; says he feels much better; has had no shooting pain from the breast bone to the back; looks much more cheerful; pulse natural; slight thirst; ordered a small blister to be put on the wound, and two or three purgative injections to be given in the course of the afternoon. 8, P. M. Saw him again. The injections had produced two copious stools. Gave him half a grain of sulphate of morphine; ordered frictions of the nitrate of mercury to be continued, and ten more grains of the same to be taken the next morning. 26. — 8, A. M. Slept well last night, but suffered from slight difficulty in urinating. Took the nitrate of mercury at 5, A. M.; has vomited but once, and has not been purged; belly a little harder; has had slight returns of shooting pains from sternum to spine; is bathed in perspiration; is more dejected; says he

will die. Ordered a purgative inema every hour, till he urinates freely; frictions of the nitrate of mercury to be continued. 6, P. M. Profuse perspiration still continues; complains of lips, tongue, and whole mouth paining him; pulse sixty-five, soft, rather irregular; belly much softer; has urinated freely, and had several large evacuations; opens his jaws nearly as well as in health; tongue coated with white fur; edges and tip red. Ordered another purgative injection; frictions still to be continued; tobacco cataplasm to the abdomen; sulphate morphine, half a grain, every hour.

27.—5, P. M. Passed a good night; had several stools; complains of tenesmus, and passes blood in the evacuations; makes water freely, but has still very slight pain; belly quite as soft as natural; has had but very few and very slight shooting pains from sternum to spine; opens his jaws freely; swallows easily: cheerful; much thirst; pulse eighty-four, soft and regular; tongue coated, with thick white fur; complains much of mouth and throat; craves for food; blister on the wound has had no effect, but to cause a copious suppuration; sulphate morphine, half a grain, to be continued every hour; frictions and tobacco cataplasms to be still continued, as I think there is no slight episthotonus. Ordered strong tartar emetic ointment to be rubbed in between the shoulders. Injections of starch, with half a grain of morphine, every six hours, if the evacuations continued; dress the wound with basilicon; weather, since yesterday morning, very unfavorable; cold northerly wind, with continual showers of rain.

29. Could not see him yesterday; to-day, at 10, A. M., found him better; no shooting pain; jaws open freely; no spasm in the back, but belly is harder, and difficulty in urinating; bloody stools were stopped by injections, on the night of the 27th; profuse salivation; mouth, gums, and lips, very much swelled, and full of small ulcers; tongue covered with thick fur, edges and tip red, and small ulcers on them; slept very well last night; not much thirst or appetite; pulse seventy-two, soft and regular. Ordered frictions of nitrate of mercury to be stopped. One ounce of castor-oil to be given, with sweet spirits of nitre for drink; frictions of hot olive oil, spirits of ammonia, and tincture of opium, over the jaws and throat; frictions with tartar emetic to be discontinued, as the pustules are numerous and sore. This case continued to mend, with a few exceptions, every day; but he required the stimulating frictions and anodynes occasionally, till the 31st December, when he was perfectly recovered. 1842.

This case was one of twenty-six days' duration from the time

of the puncture, and nineteen days' constant treatment. I have given all the detail that was necessary, in order that the case may be followed all the way through. I will now give another, of a different practice, in detail, so that a choice may be made, according to circumstances.

*Dr. J. W. Stapleton, of Trowbridge*, relates a case of traumatic tetanus, which proceeded from a lacerated wound of the inside of the hand. The wound was treated in the usual way, and on the sixth day it was doing well, and the lacerated parts were nearly healed; but on the twelfth day, the symptoms of tetanus made their appearance, with pain in the lower part of the chest, extending through to the spine. The spasm contracted, not only the breast-bone, but the lower ribs, very much, and there was much tension of the muscles of the neck and lower jaw. The spasms of the muscles of the back were permanent. The wound was now bathed in an offensive sanious discharge, and extremely painful. It was first freed from everything that could irritate, and a simple poultice applied. Three drops of Croton oil were placed upon the tongue, and a blister laid along the whole course of the spine. As soon as the oil had operated, a grain of the acetate of morphine was given, every hour. In three hours all the symptoms were increased; there was a deep hollow at the pit of the stomach, and excruciating pain throughout the region of the skirts. The muscles of the neck were perfectly rigid, and those of the back were generally partaking of the spasmodic action. All the joints of the trunk of the body seemed enchilosed or stiffened, so that when he was removed from the bed, he lay in the arms of those that carried him, like a marble statue. He referred all his pain to the diaphragm, and the recti muscles of the abdomen. The abdomen was forcibly thrust forward, and was immovable during the respiratory act, which was maintained wholly by the muscles of the chest. No complaint was made of the hand from this time. The morphine was continued throughout the night, without mitigation of the symptoms. On the following morning the disease was evidently progressing to a fatal issue. The pulse was eighty-five, laboring, and contracted; the heart's action tumultuous and irregular; the skin of the natural temperature, and the mind unimpaired. The following injection was given:

*Recipe:* Oil Turpentine, one ounce.  
Tincture of Opium, two drachms.  
Asafœtida Mixture, twelve ounces.  
Hop Water, eight ounces.

These were all mixed together, and used as an injection; at the same time two grains of morphine were sprinkled on the blister, and the following medicine directed, every alternate hour:

*Recipe:* Asafoetida, eight grains.  
Camphor, six grains.

Made into a bolus, to be taken immediately, and repeated every two hours, and with these the following pill:

*Recipe:* Acetate Morphine. one grain.  
Extract Belladonna, one grain.  
Extract Conium, four grains.

Made into a pill, to be taken an hour after the bolus, and repeated every two hours. Four hours after this, he was evidently worse. Blisters were now placed on the abdomen, and, as the injection was retained, three drops of Croton oil were given, which soon acted copiously, yet without any remission of the symptoms. A fair trial of the opiates and antispasmodics had been given, twenty-six hours having been faithfully occupied in their administration. The progress of the case had been uninterrupted from bad to worse. The patient lay immovably fixed, his weight resting on the back of his head and on his sacrum; the trunk of the body forming an arch, with the cavity towards the mattress. A child might have crept under him without touching his back. His jaws were nearly clenched, and his lips horribly distorted; his eyes glared from their sockets, and every evidence of extreme suffering was manifest. He was perfectly sensible, and would reply to questions, when asked him, and begged to be left alone; pulse ninety, sharp and jerking; skin hot and dry; cheeks flushed. In this situation, with a watchful eye upon the effects, I gave him three ounces of alcohol, and three of water, mixed; and two more of each, in a quarter of an hour. In twenty-five minutes he lay on his side in a profound and tranquil sleep, without any appearance of apoplectic stertor or other cerebral congestion; every muscle was in a state of quiet relaxation, and the sense of pain had vanished, as if by charm. The tumultuous action of the heart had ceased; the pulse sunk to sixty, and was fuller in volume; the features had resumed their natural expression, and the whole surface of the body was drenched in profuse perspiration. He was kept drunk for seventy-two hours, complaining of no pain, and had no return of the spasm. The bowels acting kindly under the use of Croton oil, on the sixteenth day the alcoholic



influence was withdrawn; but when consciousness returned the spasms returned also, although in a less degree, and they immediately vanished under the use of the alcohol again. On the evening of the seventeenth day, the back became again arched, and the breathing hurried; he was at this time able to answer questions, and move in his bed. The clonic spasms suddenly supervened, and he expired after they subsided, without a single struggle or pain, apparently from exhaustion. Thus I have given a case treated by Dr. Stapleton, to show the result of his practice.

Other cases have been treated by stimulants and recovered. *James William J. Lott, Esq.*, of Bromley, communicated by Dr. Wilson, physician to St. George's hospital; a case of traumatic tetanus, cured by large quantities of wine, brandy, and other things. The patient was a robust man, aged thirty, who was thrown from his horse, and received a fracture of the leg, with considerable injury done to the soft parts. The patient did well for fourteen days before the tetanic spasms commenced; at this time, healthy granulations had formed, and were covering the denuded bone. He had some spasms of other muscles, but those of the jaw were chiefly affected. On the 14th, he complained of cramp and spasm of the chest; a blister was applied, and calomel and cathartic medicines given. 15th. He was better, but very weak. He was ordered brandy and water, with medicines and ether, every two or three hours, after which he somewhat rallied. He continued about the same till the 18th, when he became worse, and the tetanic spasms set in. His back was arched, and on a consultation being had, it was agreed that the stimulants should be continued. Opiate and turpentine injections were given, and Croton oil by the mouth. This treatment was continued till the 21st, when he sunk very low, with a pulse about forty, and in a cold, clammy sweat. The quantity of brandy exhibited at this time was rather more than three pints in twenty-four hours. Every part of the muscular system seemed affected with spasm. 22nd. He was much the same, but the wound was looking more healthy. Dr. Wilson saw him, and urged the continuance of the stimulants; and recommended the entire discontinuance of opiates. A suppository of quinine, susqui-carbonate of ammonia, and camphor, was ordered every three or four hours. From this period he continued to improve, and on the 26th all tetanic symptoms disappeared. Nourishing diet and care soon restored him entirely.

Although we have given four cases in detail, in order to give



an idea of the necessity of perseverance in the use of remedies in the treatment of this awful disease, yet there are various other remedies that have been used, some successfully, and others unsuccessfully; and in many cases, the same remedies have proved successful at one time, and unsuccessful at another; so that, from the experience of the medical world, we are not able to say that we have any one remedy that will at all times cure this disease.

In an essay read before the royal college of surgeons, London, by *Dr. Blizard Curling*, for which the prize was awarded, we have a collection of one hundred and twenty-eight cases given, with the ages of the patients, the causes of the disease, the length of time which it lasted, the number of recoveries, (fifty-eight,) and the remedies used, under which they recovered. Of this number sixteen were females, of whom twelve recovered; and forty-two males.

It is very important that the premonitory symptoms be attended to in the treatment of tetanus, because it is possible we may exercise a control over them, which we cannot over the disease after it is established. The premonitory symptoms are, twitchings of the muscles of the affected limb, a degree of lassitude, restlessness, great depression of spirits, and an uneasy sensation about the stomach and diaphragm. These are often observed before its development. But the common precursors of both forms of tetanus are, cold chills, and an uneasiness about the throat, leading the patient to imagine that he has caught cold; these latter symptoms are frequent enough to render it important that they should be borne in mind. When an injury of serious consequence has been inflicted, it is better to be on the safe side, and regard such symptoms with suspicion.

Much has been said and written on the local treatment. The disease being generally caused by local irritation, it is natural to think that the removal of it would lead to the removal of the effect. The means adopted may be looked upon as essentially two. *First*. Amputation, or the excision of the affected part. *Second*. A division of the nerve proceeding to the seat of injury. The earlier this is resorted to the better. This was resorted to in eleven cases of the one hundred and twenty-eight referred to above, and seven were cured. The division of the nerve was practised with success first by Hicks, surgeon of Baldock, in 1797. The case was one of lockjaw — not acute — which followed a contusion of the hand. Two other successful cases are

related by *Baron Larrey*, and another by *Dr. Murry*. These four are the only unexceptionable cases, and, so far as we know, the operation was successful.

The constitutional treatment consists, first, of purgatives. These are indispensable. The purgatives given have been of all kinds, *calomel*, *jalap*, *Croton oil*, *castor-oil*, the *resinous gums*, *scammony*, *gamboge*, *colocynth*, &c. It will be observed that no ordinary dose of medicine will generally operate on these patients. In some cases, from ten to twenty times the ordinary dose will scarcely operate. After the bowels have been freely evacuated, all kinds of antispasmodics have been largely used. In some cases, from fifty to a hundred grains of opium have been given in a day and night; large quantities of *asafoetida*; two and three grain doses of *belladonna*, every two or three hours; with the extract of *stramonium*, in two or three grain doses, as often. Bleeding has been used, and this is proper enough, when the symptoms are inflammatory; but when they are not, facts are, on the whole, against its employment; it has been carried to fainting, several times, with but little good; but if it will do no other good in cases decidedly inflammatory, it will favor the operation of the medicine. Counter irritation, such as blisters and actual cauterics, (burning,) in most cases does no good, but proves troublesome to the patient as well as the physician. Opium, in large and repeated doses, was used in Europe, in four cases of the one hundred and twenty-eight, and forty-eight recovered, of which number ten were females. Yet the best writers on this disease, have not much confidence in opium. Tobacco has stronger claims to usefulness than opium, or any other remedy; many writers particularly insist on its efficacy. Half an ounce of the leaves boiled to a strong decoction and given in the form of injection, is the mode of using it; it should be repeated in from four to eight hours. The strength of the patient, at the same time, is to be supported by strong mutton broth, and wine or brandy. In nineteen cases in which tobacco was employed, nine recovered. In very acute cases, tartar emetic has not been found serviceable; it has proved to be better in chronic cases. The cold bath has been tried in a few cases; it has done good, though some have died instantly in the bath. The warm bath has never done any good, according to *Curling*. The vapor bath was successful in two cases out of three, according to *Dr. Marsh*, of *Dublin*. Tonics and stimulants are absolutely necessary, in protracted cases, in order to support

the strength and sustain the patient. *Carbonate of iron* has been used most freely. *Dr. Elliotson*, in two severe cases, after the bowels had been freely acted upon with turpentine, gave the *subcarbonate of iron*, in half ounce doses, every two or three hours; both terminated favorably. In the third case, the disease was far advanced when the remedy was resorted to, and the patient died. *Hydrocyanic acid* has not proved to be of any service. The use of *colchicum autumnali* has been attended with a like result.

After all is said that can be said, the success and the failures all enumerated, there are a few facts that must be attended to, in order rightly to apply the remedies in the cure of this dreadful disease. Foremost among these is a proper discrimination in the forms of tetanus, which require material practical differences. *First.* The purely acute tetanus. *Second.* The acute inflammatory tetanus. *Third.* The chronic tetanus. In the first, a free action from the bowels must be obtained and maintained; and the spasms must be allayed with the tobacco injections and cold effusions, or any other sedative; and in the due exhibition of tonics and stimulants. For the second, the antiphlogistic treatment is necessary, combined with the means of allaying the spasms as used in the first species. The third, or chronic tetanus: purgatives, opium, antimony; vapor and warm bath; the carbonate of iron, and other tonics; electricity. If the case be attended with febrile or inflammatory symptoms, proper means must be used to remove them. In such cases, the combination of opium and other sedatives, may be advantageously combined with the antiphlogistic treatment. But it must be remembered that active depletion tends to debility, which operates against the patient ultimately. Be cautious, therefore, and do not push it too far.

In regard to the mode of termination of tetanus; it may terminate in recovery, or it may not. When recovery does take place, it is very gradual, the disease lasting from ten days to two or three months. Of the fifty-eight cases that were cured out of the one hundred and twenty-eight, as above, eight were cured in the course of a week; three in ten days; four in a fortnight; four in three weeks; fifteen in a month; four after five weeks; eight after six weeks; three at the end of eight weeks; three after two months; and in two, the symptoms were not all removed till after three months. Even after the spasms have subsided, it is a long time before the muscles gain their tone and

action. In two cases, the muscles continued stiff for some time after recovery; in one case, at the end of nine months after the patient became affected, although enjoying good health, yet, on catching cold, he was still troubled with a stiffness about the jaws. In a case which *Mr. Curling* witnessed, rigidity of the muscles of the lower jaw continued for six months after the attack. In a case related by *Dr. Currie*, at the end of three years, the features retained the indelible impression of the disease. When we remember the soreness left by a bruise, or a cramp, we cannot wonder at the effects of such violent contractions of the muscular fibres as occur in tetanus. These facts have been drawn from the European and American works and periodicals.

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## INFLAMMATION OF THE BRAIN.

THIS disease is known by a severe pain in the head; aversion to light; face more or less flushed; fever, etc. The pathology of inflammation of the brain, is, in some degree, obscure and difficult, from the difference which occurs in several of its secondary or concomitant symptoms, occasioned, partly, from its exciting causes, and partly from the portion of the brain chiefly affected. From these causes, some nosologists have multiplied a number of distinct species, so that the whole subject has been thrown into confusion by a fearful host of distinct names. But we shall not so view the disease; for the correct mode of treatment for one of the species, will meet the indications of the case in all the others, only varying the remedies according to the violence manifested by the symptoms.

Inflammation of the brain, as it occurs in children, we have treated of in its appropriate place. We have, therefore, only to treat of that form of the disease to which adults are liable. The form of inflammation to which this class is subject, is properly defined by acute pain in the head; intolerance of light and sound; cheeks permanently flushed; eyes red; watchfulness; delirium, with a variable pulse—sometimes it is quick, sometimes slow, sometimes depressed, and sometimes full, according as the disease is characterized by acute pain, delirium, stupor or other concomitants.

The remote causes of inflammation of the brain, are those of inflammation in general, applied to the organ affected; such as sudden exposure to cold after great heat; cold liquors incau-

tiously drank in the same state; drunkenness, and especially from spirits; exposure of the naked head to the rays of a vertical sun; violent passions of the mind; obstructed menstruation; and various kinds of poison. Inflammation of the brain is not often seen in this country as a primary disease, though it is a frequent attendant upon other diseases, as typhus fever and congestive fevers; repelled eruptions, as smallpox, measles, scarlet fever, etc.; hydrophobia, injuries of the brain, and severe grief, or too intense study. It sometimes makes a near approach to mania, but can be easily distinguished from it by the nature of the exciting cause—when this can be ascertained—the abruptness of the attack, and the violence of the fever. Added to this, there is, in inflammation of the brain, for the most part, though not always, a hurry and confusion of the mental powers; a weakness and unsteadiness of mind, which is rarely, and perhaps never, met with in genuine mania. It may, after existing for a long time, terminate in mania. The explanation of the various symptoms which appear in this disease, is to be found in the fact, that the inflammation is seated sometimes in one portion of the brain, and sometimes in another; sometimes in one membrane, and sometimes in another; and in different portions of the same membrane, and, also, of different degrees of intensity. This explains the reason why the symptoms of oppression and irritation should so much vary, as we find they do in different cases;—why there is sometimes no delirium, and at other times a considerable degree of delirium; why the delirium is sometimes furious and impetuous, constituting the delirium furor of some writers; why, in other instances, it is mute and muttering; and why there should occasionally occur examples of that comatose or heavy stupor, to which the Greeks give the name of typhomania; as, also, why the pain and fever should vary from great acuteness to a more disquieting headache, and slight increased action.

#### TREATMENT.

This disease must be treated both upon general and local principles. The general remedies are, bleeding from the arm, purgatives, and a low diet. The local remedies are, local bleeding and topical applications to the head. Bleeding from the arm should be used to the extent of the patient's strength, in the early part of the disease; the bowels should be freely opened with calomel and jalap.

*Recipe:* Calomel, twenty grains.  
Jalap, twenty grains.



Mix, for a dose. As soon as the operation is over, if the symptoms are not very much abated, leeches should be applied to the head. The common place of applying them is to the temples; but much experience has proved to me, that the best place to apply them is behind the ears, immediately under the mastoid process (the bony lumps behind the ears.) At least eight or ten should be applied behind each ear, at the edge of the hair, or an inch below it. They should be kept bleeding, by renewed applications of warm wet cloths, as long as the patient's strength will allow. Bladders of ice or snow, if it can be had, or very cold water, should be kept constantly applied to the top of the head, the hair being shaved off. The cold water may be poured upon the head for some minutes at a time, and frequently renewed; wet cloths should not be kept on the head, as the heat accumulates under them, and overcomes the good they would do by evaporation. The bowels may now be kept open, by neutral salts, for a day or two; and if the symptoms should not subside, small doses of calomel should be given, and repeated every three hours, till a spitting is produced, when the medicine should be given less frequently, but kept up for some days. If the mouth is likely to become very sore, an emetic of tartar should be given, so as to act two or three times. Then small doses should be given, at intervals of an hour or two,—so as to nauseate slightly,—and kept up for a day or two, when the salivation will abate. The mouth should be frequently washed with weak spirits of camphor; or an ounce of the essence of camphor to a gill of water, is a more elegant preparation. The bowels now may be kept open with *senna tea*, *castor-oil*, *rhubarb*, or the compound pill of scammony. The ice, or cold water, should not be omitted until all the inflammatory symptoms have subsided. When the disease is removed, the patient sometimes cannot sleep without becoming faint from the exhausted state of the brain. In such cases, some gentle stimulant should be given, such as Dover's powder, ten grains, or a few grains of camphor, or a little wine and water. In a state of convalescence, some tonics are necessary; as the aromatic wine of iron, a tea spoonful three times a day, or Huxham's tincture, in like doses. The diet, during the cure, should be light and thin, and some slightly acidulated drink, such as warm lemonade, or rice or barley water, with lemon acid in it, may be taken. The room should be darkened, and kept perfectly quiet during the whole period of the disease.

## CONSUMPTION.

CONSUMPTION is characterized by cough, pain or uneasiness in the chest, chiefly in a recumbent position, hectic fever, with copious expectoration, and a delusive hope of recovery. There are three varieties of consumption, which I shall describe. These varieties I have taken from Dr. Duncan's very valuable observations on consumption. They are evidently drawn from a close and practical attention to the disease, and will be recognized as such by every close student in medicine. They are as follows: *First*, Catarrhal; *Second*, Apostematous; and, *Third*, Tubercular consumption.

In the first variety, catarrhal consumption, the cough is frequent and violent, with a copious expectoration of a thin, offensive, purulent mucus, rarely mixed with blood. In this species, there is generally soreness in the chest, and transitory pains, shifting from side to side. This form of consumption is generally produced by cold, or the neglect of a catarrh, which is the effect of cold upon the lungs.

The second variety, or apostematous consumption, is not attended with a free secretion of mucus from the lungs, as is the first variety, but is dry, accompanied by returning fits of hard coughing, with a fixed, obtuse pain in some part of the chest. The pain is generally circumscribed, and sometimes pulsatory. This dry cough, after a time, terminates in the discharge of a quantity of thick, purulent matter, sometimes almost suffocating the patient. Then all the other symptoms are temporarily relieved. When hemoptysis is the cause, the disease generally terminates in this form.

In the third variety, or tubercular consumption, the cough is short and tickling, and the secretion is of a watery whey, like sanies, which is sometimes tinged with blood. The pain in the chest is slight. The spirits are generally good, and the patient feels strong hopes of recovery. This form of the disease is usually the result of a scrofulous habit. It is very evident in America, if not in Europe, that the tubercular species may run into the apostematous, and the catarrhal into either of the others, according to the peculiarity of the constitution in which they may appear, and other concurrent circumstances, as a common cause may produce them in constitutions of different idiosyncracies.

I am aware that writers have given another variety, which they call dyspeptic consumption, resulting from a previously diseased state of the stomach and digestive organs, in which the lungs partake by sympathetic action. Drunkards are more apt to fall into this form of the disease than other persons. Those who have been the subjects of frequent bilious attacks may also become the subjects of this form of consumption.

Consumption is a disease of high antiquity, as well as of most alarming frequency and fatality. So frequent is it, that, according to the computation of authors in medical statistics, one fourth part of the inhabitants of Europe are prematurely carried off by it, and I may say that thousands in America are annually falling by its ruthless hand. The ordinary age at which consumption attacks is from eighteen to twenty-five years; but it certainly anticipates the first, in many instances, for children of tender age have it, and persons far beyond thirty-five are sometimes the subjects of its fatal grasp. The only causes of consumption with which we are acquainted are predisponent, and those that excite the predisposition into action. The strictly consumptive diathesis is about as follows: a smooth, fair skin, a ruddy complexion, light or reddish hair, blue eyes, a long neck, a narrow chest, slender form, high shoulders, and a sanguine disposition. In some cases, however, the skin is dark, and the hair almost black; and, according to *Dr. Withering* and *Dr. Duncan*, "the most constant sign of a consumptive habit is an unusually large pupil of the eye." The teeth of consumptives are usually clear and white, the eyes are peculiarly bright, and both become more so when the disease has commenced its inroads upon the constitution; the teeth then assume a pearly lustre, and the eyes a milky whiteness, showing how completely the animal oil is absorbed and carried off, not merely from the surface, which produces emaciation, but from every organ whatever. This appearance accompanies, more or less, all the varieties of the disease. Some writers, however, limit it to the tubercular formation; for what reason, I cannot clearly see. They, however, consider it to be a distinguishing characteristic of a predisposition to this form of the disease. *Dr. Simmons* says, that "those who are carried off by tubercular consumption will be found never to have a carious tooth, nor to have lost one by decay. This, I am sure, is not true in this country. The exciting causes of consumption are various, as mechanical irritation of the lungs, from swallowing hard substances, which

pass into the lungs; the inhaling of the dust of hard substances, as the grindings or filings of cutleries; the sudden exposure of the body to great heat or cold, when unprepared for it; great exertion in speaking, singing, or playing on wind instruments; the irritation of scrofula, measles, or syphilis; the sudden suppression of cutaneous diseases, that have existed so long as to have formed a part of the habit—as the itch, tetter, or other kinds of herpes; or of any habitual discharge, as the suppression of the catamenia, or periodical piles. Sometimes, a too rapid growth of the body, or the effect of various corroding passions preying for a long time upon the mind,—as mortified ambition, disappointed love, home-longing, when at a remote distance from one's friends and country,—will produce the disease.

Instances of mechanical irritation of the lungs producing consumption are very numerous in the factories where grinders are constantly engaged in grinding their tools on dry stones; the grit is inhaled, and, settling in the lungs, acts as a constant irritant, bringing on what is called by some, the grinder's rot. Where millstones are dug and cut in caverns, the operators are subject to this disease. Indeed, all men who follow stone-cutting, or millstone picking, are more or less subject to this disease, from the fine particles of stone settling down in the air-cells of the lungs, and by their irritation destroying the texture of the mucous membrane. *Dr. Fordice* regarded the dust of the streets of London as a fruitful source of consumption to the inhabitants. The lodgment of a small piece of bone in the trachea has been productive of consumption. The elongation of the uvula, constantly tickling the throat and exciting cough, will ultimately bring on consumption.

The injudicious use of the voice, by jarring speakers, has broken down the lungs; and they have been made to lament their folly after it was too late to mend the injury. *Dr. Young* observes that singers and public speakers are most liable to consumption; and *Morgagni* and *Valsalva* agree with him. *Cicero*, himself, felt it necessary, as he tells us in his book on orators, to retire from the forum for two years; during which time he travelled into Asia, and afterwards returned with renewed vigor to the duties of his profession. *Molière* died of hemoptysis, immediately after performing, for the fourth time, his *Milade Imaginaria*.

There are many diseases that have a tendency to excite consumption, from their close connection with the lungs, and affinity



to hectic fever, which is one of its most prominent symptoms ; as measles and bad colds. Whether the tubercles found in the substance of the lungs, in the tubercular variety of consumption, be, in every instance, strictly scrofulous, may admit of a doubt ; but that they are so, in many cases, is unquestionable. Hence, scrofula becomes very frequently the primary cause of consumption. The tendency of the syphilitic poison to produce consumption, has been noticed by almost every writer on this disease. *Bennett* particularly dwells upon it.

Rapid growth is always attended with debility, and consequently with irritability of the entire system ; and where there is a predisposition to consumption, this will become the harbinger, unless great care be taken. *Richerand* relates a case of this kind, where the patient had grown more than an English foot in one year ; he died of consumption. Malformation of the chest is another cause of this disease ; and here we meet with frequent examples in our practice.

But of all the causes of consumption, the frequent and severe vicissitudes of temperature are probably the most common ; so common, indeed, and at the same time so active, as often to be the cause of consumption in constitutions where we cannot trace any constitutional taint or predisposition whatever. Hence, the most frequent examples of consumption are to be found in those countries that are most subject to vicissitudes of temperature. It follows from this, that a regular and uniform temperature, whether it be hot or cold, is better for the lungs, than a variable one. For this reason, the inhabitants of Russia and the West Indies are rarely troubled with consumption. Where a consumptive diathesis is once generated, it is very often transmitted from generation to generation ; and it is thought by many eminent medical men, that the disease may be communicated by long and intimate union with a consumptive ; as when the wife and husband sleep in the same bed for years, the sound one may, by inhaling the consumptive's breath, and breathing the odor of the sputa, ultimately take the disease. Other writers have denied that any such communication can be made. *Aristotle*, among the Greeks, and since him, of other countries, *Galen*, *Martin*, *Hoffman*, *Vogel*, *Desault*, *Darwin*, *Rush*, and others, have assured us that it may be communicated by long contact of breathing, &c. We, however, are not disposed to believe consumption to be contagious, in anything like the common acceptance of that term. The earlier symptoms of



consumption, in whatever manner excited, are insidious, and frequently show themselves obscurely. The patient is, perhaps, sensible of an unusual languor, and breathes with less freedom than formerly, so that his respirations are shorter, and increased in number; he coughs occasionally, but does not complain of its being troublesome, and rarely expectorates at the same time. Yet, if he makes a deep inspiration, he is sensible of some uneasiness in a particular part of the chest. These symptoms gradually increase, and at length the pulse is found to be quicker than usual, particularly towards the evening. A more than ordinary perspiration takes place during the course of the night, and if the sleep be not disturbed by coughing, a considerable paroxysm of coughing takes place in the morning, and the patient feels relaxed and enfeebled. This may be said to form the first stage of the disease; and it is the only, or nearly the only, hopeful period, when medical aid can be profitably used.

The disease is now decidedly established. The cough increases in frequency, and from being dry before, is now accompanied with mucus, varying, according to the peculiar modification of the disease, from a watery whey-like sanies, occasionally tinged with blood, to a sputum of nearly genuine pus. This discharge may, and often does, vary in appearance, from a livid to a deep black, light brown, or a light green; flattened, or round; hard, or soft; fetid, or without smell. In many instances, it is small in quantity, and in some cases of apostematous consumption, there is no expectoration at all. The patient will die before the vomica breaks, and of course he discharges nothing. The uneasiness in the chest, that was only produced at first on making a deep inspiration, is now permanent, and attended with a sense of weight. The hectic fever has now assumed its full character; the patient can lie with comfort only on one side, which is usually the side affected; the breathing is frequently accompanied with a sound like the ticking of a watch. The strength now fails apace; the pulse varies from one hundred to one hundred and twenty or thirty in a minute; the teeth increase in transparency, and the eyes become a paler white; the fingers shrink, except at the joints, which seem to become prominent; the nails bend down, for want of support, and sometimes become painful; the nose is sharp; the cheeks have a red flush on them, especially in the evening; the eyes are shrunken, but bright; the countenance generally wears a smiling look; the whole body is emaciated; the spine projects, instead of shrinking, from the decay

of the muscles, and the shoulder-blades stand out like the wings of a bird. This fills the second stage of the disease.

The third stage is melancholy, but short. It commences with a depressing and colliquative diarrhœa. Until this period, and occasionally through it, the patient keeps up his spirits, and still flatters himself that he may recover, while all his friends about him are in despondency, and find it difficult to suppress their feelings. The voice becomes hoarse, the fauces apthous, or the throat ulcerated, with a difficulty of swallowing; dropsy, in various forms, sometimes makes its appearance; the limbs become anasarcaous; the belly tumid, or the chest fluctuating; and the oppression is only relieved by an increase of the night sweats, or of the diarrhœa; for, as one of these symptoms increases, the others become less apparent. A few days before the patient's death, he is frequently unable to expectorate, from weakness, and sometimes dies from suffocation. But it is much more common for the secretions of pus, as well as the expectoration, to cease because the capillary arteries lose their power, or the fluids of the system are exhausted. There is, also, sometimes, a degree of languid delirium for some days, and occasionally a total imbecility for a week or two, though in general the mental faculties are unimpaired, and the senses acute; the patient being perfectly alive to the distress of his friends, and the danger of his situation, and retaining, even when his extremities are becoming cold, a considerable quickness of hearing and feeling. The closing scene is often painful. But in other cases, it approaches like a sweet sleep, which is the actual commencement of death.

Such is the common progress and termination of consumption. But it varies in different subjects, very considerably, in the character and combination of its symptoms, and particularly in the tardiness or rapidity of its march, according to the habit or particular idiosyncrasy of the individual, or the variety of the disease itself. When the constitution is firm, and the hereditary predisposition striking, it commonly assumes the apostematous form, and runs on to the fatal issue with great rapidity, constituting what is familiarly called the galloping consumption. In this case, the activity of the absorbents is astonishing; they seem to be constantly preying upon the whole system, like ravenous wolves. The animal spirits, on the contrary, are unusually active, and all is hope and ardent expectation. The secretions play with equal activity, and the skin is drenched with perspira-

tion. The bronchial vessels are overloaded with mucus. Vomica after vomica is distended with pus, and the bowels are a mere channel of looseness. The absorbents drink greedily all the animal oil. The cellular substance, parenchyma, and muscles, are all swallowed up and carried away, till every organ is rapidly reduced to half its proper weight and bulk, and the entire figure becomes a shrivelled skeleton. So swift was the disease in the case of the *Duchess de Piennes*, that *M. Portal* says, "She died in ten or twelve days from the first alarm."

In other cases, the march of consumption is remarkable for its tardiness. This is particularly the case with the tubercular variety, when not quickened by hemoptysis or spitting of blood. A man may live under this slow form of tubercular consumption for forty years; but the mean term of its duration is less than twelve months, as shown by dissection. Tubercular consumption is the most frequent form of this disease. The tubercles are found in the form of nodules or indurations, indiscriminately, in all parts of the cellular tissue of the lungs; but more particularly in the upper and back parts. In their first stage they are very small, whitish, and opaque, like small glands, but they are sometimes more transparent, like cartilage, with black dots in their substance. They gradually enlarge, till they are half an inch or more in diameter; but generally, when they have acquired the size of a large pea, they begin to soften in their centre, and then open, by one or more small apertures, into the neighboring air-tubes; or else they remain for a longer time, and form small vomica, containing a curdy, half-formed pus. They occasionally unite, and form large abscesses. Some have supposed that these are glands diseased, and loosened, and thrown off; but *Dr. Bailie*, whose knowledge of anatomy, and especially of morbid anatomy, is acknowledged, declares that "no such thing as a gland is found in the lungs, or its cellular membrane, in a sound state, constituting the seat of these tubercles; and as scrofula selects for its abode a glandular structure, tubercular consumption cannot with strict propriety be called a scrofulous disease." Yet, as the untempered fluid contained in the tubercles resembles that of scrofula, and more especially as this variety of consumption is very apt to be found in constitutions distinctly scrofulous, the analogy between the two is extremely close, and has often led physicians to a similar mode of treatment. It is not necessary that tubercles should exist, in order that an abscess should be formed; for it has often been known

to exist without the presence of tubercles, and where not the least trace of tubercles could be found, especially where consumption has followed rapidly upon inflammation of the lungs, or where the disease has suddenly taken place in persons of a robust habit. And in those cases where the catarrhal symptoms have been striking, and, in the increasing hoarseness and free discharge of muculent pus, have evinced extensive inflammation on the surface of the trachea or windpipe, *M. Portal* has found the whole surface of the tube lined with a crust resembling bone. In some instances, the lungs, from the accumulation of new matter, have weighed not less than five or six pounds, which is nearly four times their ordinary weight. But in other cases, they have been so reduced as not to weigh more than half their ordinary weight, and leave the cavity half vacant. *Mr. Bailie* says, he has "seen them shrivelled into the appearance of leather." In this state, breathing would be impossible, if it were not for the fact, that the lungs, in a healthy state, are capable of containing ten times as much air as is received by an ordinary act of inspiration; and hence, are capable of losing a very large part of their capacity without causing suffocation. In some cases, one lung is entirely destroyed, and the office of respiration maintained by the remaining lung alone, for many years. Many ingenious experiments have been invented to distinguish between pus and mucus, in order to determine the actual nature of the disease. Such trials may gratify the curiosity of the pathologist, but from the variable and frequently complicated nature of the expectoration, in the most dangerous as well as in the early stages of the disease, we can derive little assistance from this distinction. Some have required the patient to spit into a basin of clear water, and if the expectorated matter sinks, they believe it to be pus, and if it swims, to be mucus. But this test is fallacious in many instances; for if a large amount of frothy or tenacious mucus be mixed with the matter, it will cause it to swim. *Dr. Hunter* employed muriate of ammonia as a test for pus, having observed that a drop of pus, on being mixed with a drop of this fluid became ropy, while neither blood nor mucus is affected by it. But the best test for pus is that given by *Sir Everard Home*, which is, to "place the substance between two transparent pieces of glass. If it be matter, we shall perceive, by looking through it towards a candle placed a little way off, the appearance of a bright circular crown of colors, of which the candle will be the centre, and a red area,



surrounded by a circle of green, and this again by another of red; the colors being so much the brighter as the globules are the more numerous and the more equable. If the substance be simply mucus, there will be no rings of colors, though a confused colored halo may sometimes be seen, in consequence of a mixture of mucus with blood, or some other material."

We have now given as short and as plain a description of consumption as we have thought would be profitable in a work of this description. We will, however, give a few thoughts on the pathology of consumption, before we proceed to give the treatment. We are indebted to *D. S. Evans*, physician to the James Street Hospital, for some lucid thoughts on this subject. But to proceed, and to make ourselves more easily understood, we shall divide the pathology into sections.

1. Consumption, in many instances, is a disease characterized by a deficient force of growth, together with symptoms, both local and general, of active pulmonary congestion.

2. That the preponderance of the white tissues in this disease is due to a diminished force of growth, whereby the tissues generally, but the red particularly, are rendered incapable of attracting from the blood their usual quantity of nourishment, and by which their power of resisting the accompanying influences of external agencies is diminished.

3. That the diminution of the force of growth depends upon an obstruction of the natural stimuli and aliment. For example, want of heat, air, light, and oxygen in the blood, &c., and the food being insufficient and innutritious.

4. That active pulmonary congestion may display itself in the form of bronchitis, hemoptysis, or pneumonia.

5. That the symptoms of active pulmonary congestion in this case are, hectic fever, emaciation, catarrh, cough, altered voice, together with derangement of the digestive and uterine functions in females.

6. That the same causes which produce the symptoms of phthisis, are likewise, also, apt to produce the secretion of tubercles.

7. That the parts of organs that have secreted tubercles, are subsequently disposed to ulcerate and suppurate; and the tubercle, at the same time, to soften in part into a fluid similar to pus.

8. That abscesses, formed by the softening of tubercles, and the ulceration and suppuration of surrounding parts, are subject to the ordinary laws of abscess, burrowing to and bursting from



the surface that presents the least resistance, following the least organized track, in their fistulous course, and cicatrizing by means of a lining membrane.

9. That the existence of tubercles is not signalized by symptoms, nor their absence the cause of the amelioration of the disease.

10. That the presence of tubercles never causes inflammation in the surrounding tissues.

11. That hemoptysis, when profuse, may be the cause of diminished growth and pulmonary irritation and phthisis.

A few remarks on the spontaneous cause of consumption may not be uninteresting to the reader. I cannot do better, on this subject, than to give what *Dr. Bennet*, Fellow of the Royal Society of Edinburgh, has said with regard to it, in the Medical and Surgical Journal for 1845. He says: "Every one who has been in the habit of making post mortem examinations, must occasionally have noticed puckerings, or contractions, in the substance of the lungs, sometimes conjoined externally with white cicatrices, sometimes with cretaceous or calcareous concretions. It is certain, from the frequency with which these appearances are met with, that, if they indicate the previous existence of tubercles, this lesion must not only heal spontaneously in a few cases, but must be a very frequent occurrence." This will appear to be the case from the following statement of seventy-three bodies which *Dr. Bennet* examined in five months. He found puckerings, or contractions, in twenty-eight; in twelve of these, indurations alone coexisted; in sixteen, calcareous concretions were also present. These facts are corroborated by *Dr. Rogee*, in the general archives of medicine of France. At the *Salpêtrière*, these lesions were discovered in fifty-one, in one hundred cases. *M. Burdet* also states, that, of one hundred and thirty-five bodies examined by him, he found them in one hundred and sixteen, or in about four fifths of the whole. In the twenty-eight cases first alluded to, three were of the age of eighteen, six between that age and forty, and nine above the latter age. There can be little doubt that they are most frequent in older individuals, who have escaped the diseases incidental to youth.

It may be well, before we proceed any further, to inquire whether the lesions spoken of by the above authors were really proofs of cured tubercular deposits in the lungs. This seems to be established by the following facts:

*First.* A form of indurated and circumscribed tubercle is frequently met with, gritty to the touch, which, when dried, closely resembles cretaceous concretions.

*Second.* The concretions are found exactly in the same site as tubercles; they are most common in the point in both lungs.

*Third.* When a lung is the seat of tubercular inflammation throughout,—recent tubercles occupying the inferior portion, and old tubercles, and perhaps caverns, the superior portion,—the cretaceous and calcareous cretions will be found at the point of the lungs.

*Fourth.* A comparison with the opposite lung will frequently show, that, while on one side there is firm encysted tubercle partly transformed into cretaceous matter, on the other the transformation is perfect.

*Fifth.* The puckerings found without the concretions exactly resemble those in which the latter exist. Moreover, whilst puckerings, with grey induration, may be found in the apex of one lung, a puckering surrounding concretion may be found in the point of the other.

*Sixth.* The seat of cicatrices admits of the same exceptions as the seat of tubercles; in one case, the author found the puckerings in the inferior lobe only; he has also met with three cases in which the lower lobe was densely infiltrated with tubercle, the superior being only slightly affected.

Hitherto, these lesions have been considered as occurring very seldom. *Laennec* only records six cases; *Andral*, eight; and various authors have published isolated cases, as remarkable for their rarity. *Dr. Williams* speaks of these appearances, as now and then, and sometimes occurring. Such is the general belief on this subject. On the other hand, the observations of *Rogee* and *Bonnet*, confirmed by those of *Bennett*, will probably serve to show that the spontaneous cure of tubercle has occurred in from one third to one half of all who die after forty years of age.—*Rankin*.

This result will no doubt excite surprise, it being contrary to the prevailing opinion; but it would not be a difficult matter to show that there is nothing in a tubercle differing from lymph, in its early stage, only in containing more albumen; and as the latter forms a superabundance of earthly salts, which may be shown by chemical analysis, it proves that tubercle is not malignant. *Gulliver* and *Vogel*, it is true, have described it as composed of nucleated cells; but after careful examination made by *Bonnet*, and others, they have not been able to discover such a formation. On this point, the observations of *Libert* more nearly agree with those of *Bennett*, and other late authors, who

have satisfactorily shown that tubercle is composed of granules of irregular shape, difficult to be described, but easily recognized by an experienced eye.

With regard to the action upon which tubercular deposits depend, two opinions have been contended for. By some it has been maintained to be a constitutional disease; by others, to be the product of inflammation. Great names are arrayed on both sides of this question. A moment's reflection will satisfy any one, that the question turns upon what is determined to be inflammation. If by that term, be understood pain, heat, redness, etc., then tubercle is not inflammatory. If, on the other hand, we consider the essential phenomena of inflammation to be an increased action of the blood, then tubercle must be considered as an inflammatory product. What, then, we ask, constitutes the difference between the products of ordinary inflammation and tubercle? It certainly is the comparatively inorganizable power of the latter. In tubercle, we have granules and imperfect cells; in the product of healthy inflammation, we have granules and perfect cells. Both these products are formed by the exudations that take place from the blood—plasma. If it undergoes transformation into perfect organism, it constitutes what pathologists have, in some instances, called the results of inflammation; in others, different kinds of tumors. If the transformation be arrested, or rendered imperfect, it forms what is called tubercle, or scrofulous deposits. The essential difference, then, between the products of inflammation and tubercles, must be sought for in a difference of composition, both chemical and vital, of the deposition of the blood. Hitherto, chemistry has not taught us in what this difference consists, but has pointed out the probability of its consisting of some form of protiene less capable of organization than fibrine. The deficiency of organization is readily seen under the microscope. These things being true, the fact, then, of the frequent spontaneousness of tubercle may be admitted. *Laenec, Andral, Cruveilhier, Rogee, Boudet, and Bonnet*, have each published cases where all the physical signs of the disease, even in its advanced stage, have existed,—the patient dying, after many years, of some other disease,—and on examination, puckerings and concretions have been found in the lungs. *Boudet* states, that in one year, he met with fourteen cases where softening of tubercular matter in a cavity was evident, all traces of which subsequently disappeared. So deeply rooted, however, is the opinion of the necessarily fatal nature of

this disease, that simply because recovery has taken place in certain cases, medical men have rather distrusted their own prognosis, than ventured to oppose a dogma of universal belief.

We have made these remarks preparatory to the better understanding of the mode of treatment which we are about to offer for the cure of this Protean monster. And if we should vary, in our mode of treating consumption, from the old beaten track, from which so many thousands have fallen into the grave, we hope you will give it a trial, before you condemn it injudiciously. That many will die of consumption we have no doubt; and that, under the best mode of treatment, will always be the case; but where none have been saved, under a proper mode of treatment many may be saved. Life depends upon your taking the disease under treatment when its first buddings appear.

#### TREATMENT.

The treatment of consumption has, for the most part, been empirical. One remedy after another has failed, because no one remedy can be of use in a disease, which, from its commencement to its termination, presents such different characters and indications. These characters and indications are only to be ascertained by a practised auscultator, and the signs which guide his practice are totally inapplicable to others, who cannot distinguish them.

Empirical means having failed to accomplish a cure, perhaps a proper study of the method in which nature operates may be more successful. The facts which have been brought forward at various times, hold out every encouragement for prosecuting a rational treatment of the disease, based upon its general pathology. For this purpose, a knowledge of the progressive march of tubercular depositions is of the first importance. At first, tubercles are deposited in a fluid state from the capillaries, in the same manner as lymph. The miliary and infiltrated forms, whether gray or yellow, after a time soften, — a process which may commence at any part of the mass, and gradually involve the whole. The parenchyma of the lungs, or the pleura, in the immediate neighborhood of such deposition, is more or less inflamed. The pleura, especially, obtains a thickness unknown in other diseases; so much so, as in some instances to acquire a cartilaginous hardness, — (the author saw this appearance in the case of H. C. D——, last fall,) — and to form a



complete capsule around the tubercular deposit. The capsule is often so firm as not to collapse when the tubercular matter is evacuated; consequently, a cavity is left. When further disposition to form tubercle is checked, and the powers of the system are sufficiently entire, this cavity contracts, and its walls unite, or close upon the tubercle, which has undergone the transformation presently to be described, and a cicatrix is formed. These cicatrices present different appearances, according as the cavity from which they are formed is deeply seated or superficial. In the first case, the walls of the cavity contract inwardly, producing a puckering of the external surface. In the second case, adhesions take place between the pleura and the surface of the lung; then it is drawn close to the thoracic walls. Sometimes no tubercular matter, or even traces of it, is to be found, either within, or in the vicinity of these cicatrices; more generally, however, it may be found to be the case. Occasionally the tubercular matter exists in round, encysted masses of a composition containing an abundance of earthy salts and crystals of cholesterine. Sometimes the greater portion is absorbed, leaving only a small residue; at other times the whole is converted into a calcareous mass. This may remain an indefinite time, or it may be evacuated with the sputa. In the latter case, the walls of the cyst contract into a dense strait scar. If then no further deposition of tubercular matter take place, there is no reason why this process, which is analogous to that which takes place in ordinary abscess, should not occur as frequently as the healing of ulcers and abscesses in other internal organs.

To accomplish this, we must overcome the pathological conditions upon which tubercle depends. These are, *First*, A morbid state of the blood; and, *Second*, Local inflammation, by means of which an unhealthy exudation is poured out, which takes the form of scrofulous or tubercular matter. The indications of treatment, therefore, are: *Firstly*, To change the pathological condition of the blood, upon which the formation of tubercle depends. There is in this condition of the blood always more or less acidity in the stomach and bowels. This must first be corrected. *Secondly*, We must furnish the material necessary for the formation of healthy chyle, from which the blood is formed; and, *Thirdly*, We must combat local inflammation. The principal difficulty in the treatment will be found to consist in removing general imperfect nutrition and debility, and the local inflammation and irritability depending upon it. When



the digestive powers are weak, and the stomach dyspeptic, it will generally be proper to commence the cure by the administration of an emetic of ipecac., followed by two or three grains of calomel, every two or three hours, till the liver throws out dark or green bile. The tone of the stomach may then be increased by the use of camomile tea. Either the flowers or the tops may be infused in water and drank cold, at the rate of a pint a day, of such strength as the stomach will conveniently bear. At the same time, eight or ten drops of wood naphtha may be taken, three times a day, in water; this will frequently alleviate the dyspeptic symptoms and increase the appetite. If the cough should be very troublesome in the morning, and the expectoration difficult, an emetic of tartar and ipecac. may be given, so as to throw off the phlegm and tubercles. If they are discharged freely, the emetic will have done much good. But if the patient strains hard, and but little is thrown off, the emetic may not be repeated till the prospect is more favorable for discharging the tubercles more freely. This may be judged of when they are discharged freely by coughing, and it requires long and repeated efforts to clear the lungs.

Emetics are of great utility in consumption, if properly regulated. But great care must be taken not to reduce the strength with them, or any other medicine. Purgatives must only be used when the state of the bowels demands them, or the liver becomes engorged. Then, blue mass and rhubarb, in equal quantities, or two or three grains of calomel, repeated at short intervals, so as to produce the desired effect, will perhaps be found the best article. If the bowels be too loose, they must be restrained by opiates. The Dover's powder is as good as any other article for this purpose; four or five grains may be taken at bedtime, and repeated, if necessary. To reduce the fever, which is always hectic, the following mixture may be given:

*Recipe:* Laudanum, half ounce.  
Antimonial Wine, three drachms.  
Sweet Spirits Nitre, one drachm.

**Mix.** Seventy or eighty drops of this mixture may be given, in water, and repeated every two or three hours, till the fever subsides. The extremities may also be bathed in salt and water, to assist in allaying febrile action. In case of a dysenteric state of the bowels, with light-colored or frothy discharges, the following pill may be given:

*Recipe* : Calomel, sixteen grains.  
Opium, five grains.  
Tartar Emetic, one grain.

From ten pills. Give one every three or four hours, till the dysenteric symptoms are removed. As it relates to expectorants or cough drops, as they are called, everything of the kind should be avoided, that has a tendency to increase the secretion to the lungs. To be sure, when the lungs are oppressed by phlegm, or tubercles, they should be thrown off; but take care that, by so doing, the disposition to the formation of tubercles is not increased, and more harm than good done by it. It will, therefore, be necessary that care be taken that more tubercles are not formed than are thrown off by the remedy used. Thousands of consumptives have been hurried to the grave by cough mixtures. Simply inhaling the steam or vapor of warm vinegar and water for a few minutes, will be better than cough sirups, that tend to relax the lungs, and favor the formation of tubercles. If expectorant mixtures be given at all, the following will be found to answer a good purpose :

*Recipe* Sirup Scillæ, one ounce.  
Cox's Hive Sirup, half ounce.  
Antimonial Wine, half ounce.  
Elixir Paregoric, half ounce.

Mix. Give a tea spoonful, every hour or two, in some mucilaginous drink, till the lungs are relieved from phlegm; then stop.

The second indication is to furnish the materials for healthy chyle, so that the blood may be made pure, and the formation of tubercles prevented. Many have been the directions to this end. The old practice is to put the patient on a light, vegetable, farinaceous diet, such as rice, mush, brown bread, &c., entirely interdicting meats, excepting birds, or the flesh of young animals. The most of this treatment, according to the theory laid down in the pathology of the disease, would be improper; for these articles generally, favor the formation of tubercles, instead of removing the disposition to their formation; and, in fact, they are best calculated to favor the formation of albumen, and should be avoided. The imperfect nutrition, therefore, will be best overcome by an easily digested and nutritious diet; these articles should abound in oleaginous rather than albuminous principles. These principles are found in milk, the crust of corn-bread well baked, and animal food, with but few vegetables; dried beef, well boiled, and taken but little at a time, and well

chewed; or dried venison, prepared in the same way; and there can be no objection to a little well cured ham, occasionally, or beef steak. But these things must be taken when there is no inflammation in the lungs or pleura. Salted provisions are preferable to fresh meats, though the patient may take fresh beef or lamb, or venison, when the appetite craves it. New milk, warm from the cow, in the morning, will be very good; an egg may be beaten and put into it, with a tea spoonful or two of the best cogniac brandy, and a tea spoonful of loaf sugar; a little brandy and water, once or twice a day, beside the new milk, and punch, morning and evening, will be good to enrich the blood. These remedies will be much aided by the following medicines: burn copperas till it is white and dry; then take this burnt copperas:

*Recipe:* Burnt Copperas, half an ounce.  
Pulv. Borax, half an ounce.  
Sanguinaria, or Pulv. Percoon Root, one drachm.

Make all fine, and mix, and form forty-eight pills. Take one pill, night and morning, for a few days; then gradually increase them to three or four, three times a day, as the stomach will bear them. At the same time, the following drink may be taken:

*Recipe:* Taraxacum Root, (Dandelion,) one ounce.

Put this into half a gallon of water, and boil it half away. Half a gill may be taken, five or six times, in twenty-four hours. These remedies must be varied in quantity, according to the state of the stomach, and other conditions of the system, which will presently be noticed. Counter irritation should be resorted to, to diminish, by proper means, the original irritation, and to stimulate some other part, where a second irritation exists, that this may become more energetic than the original, taking care that the new seat of disease shall be so far distant from the first, that the primary irritation may not be increased by the contiguity of the second.

These are the chief elements you have to bear in mind, in the employment of the remedy. To effect these purposes, you ought, in the first place, to use local and general depletion, as circumstances may demand, together with those contra stimulants which are best calculated to diminish irritation. Having in this manner reduced the original irritation, you can convert it into a mere secondary affection, by exciting a more severe inflammation elsewhere. Then it will follow the ordinary laws of

secondary irritation, and gradually disappear in proportion as what is now the principal disease progresses towards a cure. It is in consequence of the neglect of these principles, that counter irritation so often fails. Recollect, that unless you can produce a greater irritation on the surface than that which exists internally, you will only do harm by applying stimulants to the skin. The best counter irritants are *vinegar* and the spirits of *turpentine* freely applied, till a strong irritation is produced; or Croton oil freely rubbed in, till a full crop of pustules appears; or the tartar emetic ointment used in like manner. The tartar ointment requires to be continued, from day to day, till a full crop of pustules appears. These articles should be very extensively applied, and the irritation should be kept up for a long time. As before stated, a small crop of pustules will do more harm than good; you must throw the irritation on the skin, or not attempt it at all. These remedies may be applied to any and every part of the chest or spine, opposite the lungs. A constant succession of blisters, where pleuretic symptoms exist, will be found advantageous; but one or two only, will, in all probability, do harm. The cod liver oil, freely applied over the chest so as to keep up a constant heat, and also taken at the same time internally, in spoonful doses, three times a day, has been highly recommended by *Dr. Evans*, of London. Bleeding is only useful where active inflammation exists either in the lungs or pleura. Table salt and alum, combined in equal parts, and a table spoonful properly mixed in a gill of honey, and a table spoonful taken three times a day, when the spitting is copious, or where there is any blood mixed with the sputa, will be found useful. Night sweats should be checked by taking elixir of vitriol, in water, three times a day, and at bedtime, commencing with fifteen drops for a dose, and gradually increasing the number, till the sweats cease. Good wine or French brandy may be taken occasionally, when there is no fever.

This is confessedly a difficult disease to cure, and the first symptoms must be watched, and the remedies promptly used, if you expect success. Delays are dangerous, in all diseases, but more especially in consumption. Exercise on horseback, when the patient is able to bear it, in good weather, is good. Flannel next to the skin in winter, and cotton in summer, should be worn. The clothing should always be adapted to the season, and the vicissitudes of the weather. The room should be kept always of about the same temperature, and the patient should

be used to cheerful company, instead of melancholy. Yet the delay in early attention to this disease makes such cases doubtful of recovery, and none who have the consumption should allow themselves to be taken by surprise, but seek to be always ready for a change.

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## DYSPEPSIA.

THE prominent characteristics of this disease are, a fastidious appetite, the food digested with difficulty, and habitual costiveness. Dyspepsia is by far the most complicated disease to which the human family is subject; hysterics not excepted. It may be considered as a combination of cardialgy, flatulency, and sick stomach, with constipation. There is an irregular combination of all the symptoms of the above diseases; sometimes one set of symptoms taking the lead, and sometimes another, often dependent on a weakly habit, aided by a sedentary life. The fæces, frequently, instead of being of proper consistence and in due quantity, are hard, slender, and often in lumps. Dyspepsia, therefore, in the language of *Dr. Cullin*, may be described as "A want of appetite, a squeamishness, sometimes a vomiting, sudden and transient distension of the stomach, eructations of various kinds, heart-burn, pains in the region of the stomach, and a bound belly." Yet none of these are uniformly present, and all of them seldom; so that, as already observed, the symptoms of cardialgy, flatulence, and sickness at the stomach, with a few others, enter in irregular modifications into dyspepsia, as those of dyspepsia enter into those of hypochondriasis or hypo. All these species lead to it, as they have a natural tendency to lead to one another. Dyspepsia is, in many instances, a direct sequel of the whole,—a chronic concentration of their symptoms.

The grand proximate cause of dyspepsia is debility of the stomach and bowels. The liver, also, partakes of the morbid action. Indeed, this morbid train of action frequently commences in the liver. This fact has not been often noticed by pathologists. The debility, and, indeed, torpitude of the intestinal canal, are evident from the habitual costiveness which so peculiarly characterizes this disease. Whether this be direct or indirect, intrusive or sympathetic, as harmonizing with the weakness of the stomach, it is not always easy to determine. But nothing can be a stronger proof of the great inactivity of the



intestinal tube, from whatever cause produced, than the feebleness of its peristaltic motion, notwithstanding the pungency of the acid and other acrimonious matters that are so frequently found in the stomach, and hence, so frequently diffusing their asperity over its inner surface. The depraved condition of the liver is manifest by the variable secretions which it throws off, as shown in the fecal discharges; they are sometimes dark, sometimes of a bluish color, and sometimes of a light clay color. Some of these aspects may be owing to the sluggish state of the bowels, whose peristaltic action may be weakened or increased by the varied stimulus which the liver and pancreatic glands throw out into them. In most of the cases of dyspepsia which have been brought on by intemperate drinking, the spleen, as well as the liver and pancreatic gland, is diseased.

*Sir Everard Home* has endeavored to show that "the spleen is a direct organ of communication between the stomach and the liver; and although no set of vessels have been exhibited that directly connect the two together, yet the fact has been established, that fluids pass directly from the cardiac portion of the stomach into the liver." But this subject does not directly concern us in a work of this description. The observation of *Dr. Wilson Philip* is universally acknowledged,—that the lungs strongly sympathize with a dyspeptic stomach; hence, the name given by some writers to one form of phthisic, dyspeptic thysis, or consumption. The dyspeptic character of the disease, however, and especially the symptoms of the affection of the liver, together with those of lowness of spirits, flatulency, and other hypochondriacal affections, always accompany it, even when complicated with consumption, and point out its real causes; and the cure must be chiefly directed to the prime malady. The dyspeptic is soon fatigued by exercise; the pulse is weak; the sleep disturbed; the extremities cold, or rendered so on slight occasions; and the tongue, for the most part, is furred, or covered with a cream-like mucus, in the morning. The last symptom, however, is not always to be depended upon; for it is sometimes wanting in this disease. It is also common to other diseases.

All the digestive apparatus is concerned in dyspepsia. It is commonly supposed that digestion takes place in the stomach alone; but this is not correct, though the stomach may truly be regarded as the prime great link in the associate chain. In the stomach, the food is broken down into a pulsatious mass called chyme; and thus converted into a mixed principle, of oil, gelatine

and sugar, and but little else. For, though we have some traces of animalization, they are nothing more than the rudiments. Nevertheless, this is the most important stage of digestion; and its perfection depends upon the quantity, perhaps, of the elaboration of the vital power which is furnished from the sensory, and pervades the system generally. Where this power is feeble, the process of chymification is necessarily impaired. The wonderful machinery of the stomach, which has no parallel, not only without the body, but in any part of it, is disturbed or impaired in its operation, and its fluids are poured forth too sparingly, or in an unhealthy state. The next stage of digestion takes place in the duodenum, or second stomach, as it is called by some. This organ easily admits of distension; it receives the food in the form of chyme from the stomach. Here the bile, the most highly animalized of all the secretions, and abundance of the pancreatic liquor, meet it, and a new play of affinities commences. The bile, as supposed by *Purcroy*, separates into two parts, its saline principle and its reason. The latter is discharged with, and gives coloring matter to, the fæces. The former becomes decomposed, attenuates the chyme, communicates their azote, and thus completes their animalization; while the juice of the pancreas dilutes and holds the material in solution. In this liquid state it is called chyle. The nutritious part, as it descends through the intestines, is seized by an almost innumerable number of mouths of lacteal vessels, that drink up whatever quantity of chyle may be intermixed with the passing mass. But the chyle is chiefly absorbed, while the chyme is in the duodenum, by an innumerable host of those lacteal vessels that present their mouths to its inner surface.

Thus we see how largely the digestive process ranges; and from what a wide-spread surface, covered with organs closely sympathizing with each other, the disease, dyspepsia, may proceed. But the finishing touch still remains to be added. The absorbed chyle, before it becomes completely assimilated, has to be exposed to the influence of the atmosphere, and, for this purpose, has to travel to the lungs. The process by which it gets there, is by entering into a vessel called the thoracic duct, and from that into the left subclavian vein, from thence to the heart, and from thence to the lungs, where, through the medium of the bronchea, the action of the atmospheric air is made upon it, where it discharges its carbonic gas, and receives oxygen from the air, which gives it its red color. From thence, it is sent back to the heart,

and distributed to the whole system. This may suffice to show the connection which exists between the stomach and the lungs, in providing the principle of life for the sustenance of animal existence. It also indicates the means by which a morbid action of the stomach may be communicated to, or lay a foundation for, impaired action in the latter. To say nothing of that sympathetic influence which is always found to take place between the extreme links of a chain that runs through every part of the animal machine, it must be obvious, that, if the chyle, which originates in the stomach, and, when in a state of health, communicates a peculiar stimulus to the lungs, as it enters their substance, in combination with the recurrent and exhausted blood, should be conveyed to them in an unhealthy condition, this peculiar system may be changed in its mode or degree of action, and the lungs, in consequence, become a sufferer; and, more especially, if they are predisposed to any kind of morbid action. And hence a frequent origin of dyspeptic consumption; which, like every other modification of disease, may depend upon imbecility of one or more of the digestive organs.

The common causes of this imbecility, whether confined to the stomach, or coëxtensive with the other viscera, may be contemplated under two heads, local and general; under both of which they are still further resolvable into two opposite extremes, of deficient and excessive stimulation; and, consequently, into a divergency of any kind from that medium of excitement and activity upon which health is made to depend. The local remote causes of dyspepsia are a too large indulgence in sedative and diluting substances, as tea, coffee, and warm water, or similar liquids taken as a beverage; or an equal indulgence in stimulant and acid materials, as ardent spirits, spices, acids, tobacco, whether chewed, smoked or snuffed; a daily habit of distending the stomach by gluttonous eating or drinking, or by a too rigid abstinence, and very protracted periods of fasting. The general remote causes are an indolent or sedentary life, in which no exercise is afforded to the muscular fibres or mental faculties; or, on the other hand, habitual exhaustion from intense study, not properly alternated with cheerful conversation and exercise; or becoming a prey to the violent passions, and especially those of the depressing kind, as fear, grief, deep melancholy, immoderate libidinousness, or a life of too great muscular exertion. Perhaps the most common of these latter causes are late hours, and the injudicious use of spirituous liquors.

## TREATMENT.

Under whatever aspect dyspepsia may present itself, the first thing to be done is to relinquish whatever cause has laid the foundation for it; we must next palliate the symptoms that aggravate and continue the disease; and, lastly, we must restore the debilitated organs to their proper tone. The patient must, in the first place, be convinced of the necessity of putting himself under a new rule of conduct, and be deeply impressed with the idea, that although he may have continued his late habits of life for a considerable time without having sensibly suffered from them, now that he is suffering, nothing but a strict conformity to a different course will remove his present complaint. Severe and long-continued study, protracted, as I have often known it to be, through ten hours a day, for many months, without any relaxation or change of pursuit, must give way to the exercise of riding or walking, and this not occasionally, but daily; and to the still better cordial of cheerful conversation. The last is of very great importance, and, without it, exercise of itself will be of little avail; for the mind, accustomed to a certain tract of mental labor, will otherwise relapse (even when riding or walking) into the same habitual course, and be dead to the most fascinating prospects around it, becoming exhausted by its own abstraction. It is to characters of this kind, more than any other, that the amusements of a watering-place promise the most ample success, where the general bustle, hilarity, and the voluntary forgetfulness of care, the novelty of new scenes and new faces and new family anecdotes, and the perpetual routine of engagements, that fill up the time with what would be otherwise trifling and frivolous, reverse the mischievous order and monotony of the past, break the study, habit and association, and give leisure to the worn-out sensory to recuperate and refresh itself. Where the same has proceeded from a town life of fashionable follies and dissipation, nothing is more common than to recommend a like change of residence; but in this case, though it may be a change of residence, it is not a change of life. Hence it is too often made without any benefit whatever. A total retreat from the world, the unbroken seclusion of a remote hamlet, the sober society of a few intimate friends, simple meals, and early hours,—instead of close and heated rooms, crowded and motley routs, costly feasts, and midnight madrigals,—are what are especially called for in this instance, but are rarely met with in a resort to a



watering-place. In such as are still distinguished for their quiet and unfrequented shores, where all is rude and simple, and spacious squares and long drawn parades have not yet put to flight the scattered and irregular cottages of former times, the advantages may still be obtained. But it is very rare that patients who are suffering from a life of dissipation, will consent to relinquish the higher attractions of our gayer and more public retreats, for what they are apt to think the dullness of an unfrequented coast, till it is of little importance whether they go anywhere, or remain at their own homes.

In like manner, the habitual practice of intemperate eating and drinking, or, in other words, of gluttony and drunkenness, must give way to wholesome plainness of diet. Yet the former habit must not be abandoned all at once, and run to the extreme of abstemiousness. This would be extremely injurious. The human economy, though in full health, will seldom brook abrupt changes. Such changes, in feeble constitutions, often induce worse diseases than those which they were designed to remove. The use of tobacco should be relinquished by degrees, and so with spirits, where the use of them has been carried to excess for a long time. The action of the stomach and bowels must be increased by gentle aperients. I am aware that many writers, and some of eminence, advise the use of emetics, in dyspepsia. But whoever tries them, and closely watches the effect, will soon discover that he may repeat them again and again; for, although they may give relief for a short time, yet the cause for which they were given will return, and demand and re-demand their use. We, then, should seek for those remedies that are calculated, not only to relieve present symptoms, but to aid in removing the cause, which gives rise to the necessity for their use. There is no disease that is so chameleon-like in its character as dyspepsia. Hence, the remedies proper for one set of symptoms, will not only fail to do good in another set, but will do harm. All the vocabulary of bitters have been lavished out on dyspeptic patients, and the results have been, as truly we might have expected, unsatisfactory. Therefore, we must be more particular in defining symptoms, and prescribing remedies. Sometimes the stomach is filled with acid gas, and the bowels are more or less irregular, with occasional pain in some part of their tract; sometimes the stomach is not filled with acid, but contains a quantity of fœtid air, not unlike that of rotten eggs, or the gas from half-putrid food, undigested. In the last case, the



bowels are torpid and constipated. The remedies, in these cases, are the antipodes of each other. Where the stomach is oppressed with an acid, so sharp, sometimes, as to set the teeth on edge, it would be highly improper to use acids; but, on the contrary, we must use those articles that have a tendency to correct the acid, and gently solicit the action of the bowels. These remedies consist of absorbents, such as the alkalies and earths. For the purpose of correcting the acid in the stomach, take thirty grains of the supercarbonate of *soda*, dissolved in half a pint of water. If the acid abounds in the stomach, an active effervescence will take place, and much gas will be evolved; and perhaps the patient may puke. If he does, as soon as the stomach is settled, the *soda* may be repeated, till the effervescence ceases and the stomach is tranquillized. Lime-water is another good remedy for this form of acid stomach; the most pleasant way of taking it, is, in half a glass of *soda*-water. It may be repeated in half an hour, with the *soda*-water, or three or four times a day, if necessary. Carbonate of magnesia is also a good remedy, when the stomach is acid. *Dr. Goode* says he has administered it in the quantity of an ounce a day, for weeks, with the best of consequences. I have known common lime-stone, burnt sufficiently to be pulverized to a fine powder, and sifted through gauze, taken by level tea spoonfuls, and washed down with water, have, when repeated three or four times a day, the most happy effect in sweetening the stomach. At the same time that these remedies are being used through the day, a gentle soliciting pill should be taken at bedtime. The following will be found good:

*Recipe:* Blue Mass, twenty grains.  
 Rhubarb, forty grains.  
 Castile Soap, twenty grains.  
 Oil Sassafras, ten drops.

Form twenty pills. Take one or two of these every night, at bedtime. If there is any soreness in the stomach or bowels, — ascertained by pressure on them, — the following pills will be better than the above:

*Recipe:* Scammony, twenty grains.  
 Aloes, twenty grains.  
 Rhubarb, twenty grains.  
 Castile Soap, twenty grains.  
 Tar or Emetic, two grains.

Form twenty pills. Take two or three of these at bedtime, every night, for three or four nights. At the same time, a tea

spoonful of *Huxham's tincture* may be taken, in an ounce of water, before breakfast, dinner and supper. The diet, in this case, must be very light, consisting of the thick, well-baked crust of corn bread, and a little milk, or milk and water, or even bread and water, if the stomach will bear nothing else. But when the stomach will bear small portions of other diet, it may be taken. Any diet that agrees with the stomach may be taken in moderation. The patient, in warm weather, should sleep on straw, husks, or a hair mattress, retire early, and rise early and take the fresh morning air, and should ride on horseback. If a man, he will find a great benefit from ploughing the ground in the spring of the year; the smell of the fresh-turned soil will give vigor to his system.

But where the stomach is not acid, but throws up a gas, as from half-digested, half-putrid food, a very different remedy is demanded. Here, the coats of the stomach, instead of being in a state of engorgement, or sub-acute inflammation, are flaccid, relaxed, and debilitated. Here there is a deficiency of acid; and, consequently, acids will be found of service in this form of dyspepsia. The mineral acids may be used, such as the *elixir of vitriol*, ten or fifteen drops in a glass of water, before each meal; but, in consequence of its concentrated form, it can scarcely be taken in sufficient quantity. The *acetus acid* is, therefore, preferable, or the common vinegar. This should be diluted with equal parts of water, and have a little sugar dissolved in it. It should be taken after the meal, or while eating. It is in this form of dyspepsia that pickles are found beneficial. Hence, the seeming palpable contradiction in dyspeptic patients, in the diet and drink which they find most agreeable to them. This is owing to the chameleon nature of the disease. In the form of the disease of which we are now treating, all the absorbents will be found ineffectual, unless they have some tonic combined with them. The following I have found to be a valuable absorbent, tonic, and alterative; I have used it for twenty years, with a happy effect; especially when the eructations resembled the gas of a half-rotten egg. Take the cinders of clay from a blacksmith's furnace, which have been burnt and melted to a glassy surface; pulverize fine, and sift through gauze. Of this preparation, take

*Recipe*: One pound.

Pulv. Copperas, one ounce.

Pulv. Antimony, half ounce

Mix them well, and sift them together, through the gauze again. Of this mixture, the patient may take a level tea spoonful, three times a day, in simple sirup. This acts as a corrector of the fetor of the stomach, and as a tonic and alterative. He who will try this remedy, will not be dissatisfied with its effects. In this form of dyspepsia, tonics are always admissible, and the metallic tonics are preferable to the vegetable. The *citrate aromatic wine of iron* is a valuable preparation. A tea spoonful may be taken, three times a day, in sweetened water; or the *citrate of iron*, forty grains to the ounce of water, and sixty drops of *citric acid*, dissolved, may be taken as above directed. Where there is great torpor of the bowels, and a purgative is necessary, the following will be found well adapted to this form of dyspepsia:

*Recipe:* Infusion of Roses, eight ounces.  
Epsom Salts, one ounce.  
Alum, two drachms.

Mix intimately. Take two large spoonfuls morning and evening; or you may use the following formula:

*Recipe:* Alum, two drachms.  
Tincture Cardamon Seeds, half ounce.  
Infusion of Roses, eight ounces.

Mix. Take two table spoonfuls, three times a day. These preparations must be varied according to circumstances. The quantity taken each day should not exceed the amount which will produce one or two free evacuations during the same time.

A perseverance in any remedy is necessary for the cure of dyspepsia. Let not the rules laid down in the commencement of the treatment be neglected. Let no dyspeptic think he can get well without first abandoning the causes which brought on the disease. Then let him follow up the remedies, unflinchingly, with a determination to obtain a cure; and take as much exercise as his strength will allow, and that in the open air. Where there is no soreness in the stomach or bowels, he should knead those organs every morning with his fists, for fifteen or twenty minutes, and walk the room, with four or five pound weights in each hand, and swing his arms as far back and forward as he can. When such exercise cannot be taken, let him ride in a carriage every day. Cheerful company and agreeable conversation are important to a dyspeptic. The clothing should always be adapted to the season, and the temperature of the air. The cold bath, by the use of a sponge or a coarse towel every morning, will be of very great service in the second species of dys-

pepsi. Wet the surface quickly all over, and then rub the skin with a rough towel till a warm glow arises. Then walk briskly till you start a perspiration; but be careful, in cooling, that you do not take cold.

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## FUNCTIONAL DISEASES OF THE HEART.

THE functional diseases of the heart are numerous. The first form which I shall notice, is one of almost every day occurrence to the physician who has an extensive practice and is known by the name of "chlorotic palpitation." The symptoms present themselves as follows: A patient who has been for some time afflicted with chloroses, is found laboring under the following symptoms:—feebleness, with a bloodless, sallow appearance; some cough; oppressed breathing; emaciation; loss of muscular strength; swelled feet and ankles, with more or less effusion into the cellular tissue of the body. To these symptoms, alarming enough in themselves, are added palpitation of the heart, with what the French call *bruit de suflet*. Here we have a train of symptoms sufficient to induce us to believe that the patient is laboring under an organic disease of the heart. The palpitation is increased on taking exercise, and sometimes accompanied by pain in the region of the heart. These are the characteristic marks by which we can distinguish whether the above train of symptoms denotes organic disease of the heart, or not. Although the other organs might readily deceive us as to its existence, yet, by carefully examining the *bruit de suflet*, we can from it discover a means of arriving at the true state or condition of the heart. It is important that we should be clearly understood by what we mean by *bruit de suflet*. It is a peculiar sound of the heart, and is much like that of a boy's whirling. This plaything is made by schoolboys, of iron, tin, or leather; it is round, and two inches or more in diameter, with two holes through it, the edges serrated or notched. A string is passed through the holes, by which the instrument is thrown round till the string is twisted on each side the circle; then, by regular pulls of the string, the tin whirls round with great velocity, making a peculiar noise, or sound, which is exactly that which, when produced by the action of the heart, the French call *bruit de suflet*.

We now proceed to describe the disease of the heart, with a better probability of being understood by a common reader. This

sound may be clearly detected by the tethescope. All the sounds of the heart's action, or those of the lungs, immediately embraced under the tethescope and the ear, can be exactly ascertained. The *bruit* sound of the heart differs from organic disease of that organ in this important particular: in organic affections of the heart, the pulse varies from fifty to ninety beats in a minute; the number of times the *bruit* is heard, will tally exactly with this, except in cases of permanent potency of the aorta, when the sound of the returning portion of blood causes double *bruit*. But in chlorotic palpitation, no matter what the number may be, the *bruit* does not correspond with them. You cannot count the number of times in which you hear *bruit de suflet*, in this affection; it goes on continually, whirring away for one half, one, two, three, or ten seconds; there is no intermission in it, as in the organic disease. It may hold on thus for half a minute, or a minute; but during this time there is no cessation. In this distinction, we have a never-failing criterion between functional disorder and organic disease of the heart. In the chlorotic *bruit de suflet*, you can hear this sound in the internal jugular veins, when the tethescope is applied to the neck, the sound here proceeding from exactly similar physical causes as those which I have detailed as explanatory of the causes which operate in producing *bruit de suflet*. In the disease before us, we have the physical cause acting in full force, which is absolutely necessary in producing an incomplete distension of the large vessels with blood, owing to the deficient supply of it in the system. But we must bear in mind, that, in a person with perfectly sound heart, and enjoying good health, you may have *bruit de suflet* from some cause or other, of only momentary duration. We will now give the treatment for this variety.

## TREATMENT.

The treatment of this chlorotic palpitation, may be divided into two heads: First, to remove the constipated state of the bowels, which always exists in this disease, for which the following pills may be given:

*Recipe:* Scammony, twenty grains.  
Cape Aloes, twenty grains.  
Pulv. Rhubarb, twenty grains.  
Asafœtida, twenty grains.  
Peruvian Balsam, one drachm.

Form twenty-four pills. From three to five of these may be taken every night at bedtime, so as to produce one or two operations in the morning.



*Second.* The second indication is to improve the general health by a generous diet of animal food, by taking a sufficient amount of exercise, either by walking or riding,—walking is preferable,—and by the use of such medicines as improve the blood, and increase the red globules. The best medicines for this purpose are the preparations of iron, such as,

*Recipe:* Precipitated Carbonate of Iron, two drachms.  
 Sub Carbonate of Soda, one drachm.  
 Thick Mucilage Gum Arabic, sufficient to form pill mass.

Form forty-eight pills. One of these may be taken, three times a day, for a few days. Then two at a time as often; or,

*Recipe:* Citrated Aromatic Wine of Iron.

A tea spoonful of this may be taken, three times a day, in sweetened water. Or,

*Recipe:* Citrate of Iron.

Forty grains of this may be dissolved in two ounces of spirits, and taken as above. By observing these rules and prescriptions, you may speedily restore the patient to perfect health. There is another variety of functional derangement of the heart, consisting solely of palpitation, without any other irregularity of this organ. This disease attacks females about, or at, the age of puberty,—say, from fourteen to sixteen,—and, in some instances, continues till the persons so attacked attain to the age of thirty or thirty-five years.

The state of the catamenia has no influence in producing this complaint; for we meet with it in persons where this secretion is regular, and in others where it is irregular, and in others where it is wholly defective; and in some cases where it is morbidly profuse, we often find it coëxisting with leucorrhœa. Females are not alone subject to this form of the disease, for we often meet with it in males, particularly such of them as have foolishly adopted the fashion of wearing laced jackets, or stays. We often meet with it in persons who have narrow chests. In those cases, the heart may be felt beating violently, and over a large extent of surface, sometimes accompanied by pain. “In no case, no matter how violent the palpitation may be, is there any abnormal sound heard.” The palpitation is much increased when the patient takes much exercise on foot. But if the person has been accustomed to horse exercise, she can bear any amount of it, without feeling any inconvenience from palpitation. We often find persons, who have been delicate in early life, and subject to

this affection, on being surrounded by a numerous family, in after life, tell us that they have outgrown this disorder, — that they have become stronger than it, and that they are no longer troubled with it.

A curious circumstance connected with the pulse occurs in this affection. If the pulse be irregular and intermittent, as is apt to be the case during the prevalence of the disease, it still continues so after it disappears, and will continue irregular as long as the patient lives. It is important to be acquainted with this fact, or we might be led to infer, from the irregularity and intermission of the pulse, in persons otherwise healthy looking, the speedy accession, or otherwise severe disease of the heart. Delicate young females are apt to have this kind of pulse, when laboring under the affection of the heart just spoken of, and it is apt to be joined with a pain in the left side, frequently extending towards the right. They are often alarmed at this pain, it being seated so near the heart; and, indeed, it is not a very uncommon thing to see this disease treated as an incipient stage of inflammation of the pericardium. Such an opinion is groundless, and is apt to lead to an aggravation of the functional disorder already existing. This affection is often dependent upon, or kept up by, some disease of the nerves that come out of the backbone. The part of the spine generally affected, is the first or second, and sometimes the last, of the dorsal vertebra, that is, from the seventh to the fourteenth joint of the back, counting from the head down. The cause of this disease is frequently overlooked, both by patient and physician, in their anxiety about the palpitation, until evident symptoms of spinal disease show themselves, either in the usual form of curvature, where the body is bent forward, or distorted and turned to one side, and sometimes angular.

#### TREATMENT.

In cases where this affection depends upon spinal irritation, we must immediately have recourse to the means best calculated to subdue it. The first step, therefore, is to ascertain the exact number of joints which are affected, and apply either cups or leeches. The number must be in proportion to the number of tender joints in the spine. In order to ascertain the particular joints affected, the patient should lie on his or her face, with the muscles all relaxed, and another person should press firmly on every joint, and between the joints, from the edge of the hair down to the point of the backbone; and as many joints as are ten-

der require the application of a cup or leech on each side the process. The blood should be freely extracted, and the bites kept bleeding as long as they will bleed. The next thing is to apply counter irritation over these joints. My experience has proved the efficacy of the veratrine ointment in these cases. The best preparation of the veratria is as follows :

*Recipe:* Pulv. Veratria, twelve grains.  
Rancid Lard, one ounce.

Mix perfectly. A friction with this ointment over these joints should be effectually made. A piece as large as the end of the finger should be rubbed in over every six tender joints, and repeated, morning and evening, for several weeks. If the veratria cannot be had, the Croton oil will be found a good substitute. It is prepared as follows: take half an ounce of diachylon plaster, and partially melt it; when half melted, pour into it one drachm of Croton oil, and gently stir till all is melted and duly mixed. This plaster, when cold, is to be spread on muslin, and applied to the part in the shape of the diseased portion intended to be irritated. It should remain till a full crop of pustules is brought out upon the skin. When the irritation is raised high enough, the plaster may be removed, and the pustules opened and dressed with cream, or mutton tallow, or simple cerate. When it is desired not to produce great irritation, the following may be used:

*Recipe:* Croton Oil, twenty drops.  
Tartar Emetic, twenty grains.  
Liquid Potassa, one drachm.  
Pure Water, seven drachms.

Mix these articles well together, and apply them to the surface twice a day, as long as you desire to keep up an irritation. *Dr. Hannay*, of Glasgow, considers ipecac. one of the most manageable and efficient applications. His formula is,

*Recipe:* Pulv. Ipecac., two drachms.  
Olive Oil, two drachms.  
Hog's Lard, half an ounce.

Mix perfectly. This preparation requires to be rubbed in for fifteen or twenty minutes at a time, and repeated frequently. *Dr. H.* says this remedy is peculiarly adapted to the case of children, where cerebral irritation exists, dependent on receded eruptions. *Dr. Corrigan* says, "The tartar emetic ointment is preferable to all others, in his estimation, in this form of diseased action of the heart, growing out of a diseased condition of the spinal nerves. The ointment should be made strong, and should be

freely applied, till the eruptions are thick and deep." The author has found a frequent repetition of blisters to the spine equal to any of the above applications. Along with these remedial means of cure, much advantage may be derived by the judicious use of the Prussic acid, or, what is safer for a country practice, *laurel water*, in half drachm doses, three times a day. Observing to follow up this line of treatment, we shall have the gratification to find the heart symptoms yield as the primary cause is removed. The bowels are, in all these cases, to be kept gently open, and the diet should be light and nourishing. But we would have you remark, — particularly in those cases in young females, of functional disease of the heart, where the spine is not affected, — that the bowels are to be kept gently open, and tonics given. The best preparations are those of iron, as given in the former species. You will take care to keep in mind the difference between these last two diseases. The first arises generally in persons at an early period of sexual life, and is attended by a suppression of the catamenia. The second arises, also, generally speaking, at an early period of life, but is completely independent of any connection of the catamenial secretion, which may or may not be healthy or morbidly profuse. The first is attended by perfect *bruit de souffle*; the second, unattended by any abnormal sound of the heart; but both coinciding in the material fact of neither proving a source of organic disease in the person affected.

I have next to direct your attention to another functional disorder of the heart, arising in persons who have led intemperate and dissolute lives. In such persons, the complaint commences with palpitations, which are exceedingly troublesome, and annoy the patient so much as to induce a fear that organic disease of the heart may be present, which may prove quickly fatal. The action of the heart is violently strong and tumultuous, and is often accompanied with pain shooting down the left arm as far as the elbow; these palpitations are much increased when the patient walks or takes exercise, if at all of a violent nature. In this state, the patient is miserable, with a continued dread of sudden death. Yet, with all these symptoms, when you examine the heart, you will find it to sound perfectly natural. The tongue, in this disease, presents an appearance which you could not, from what has been said above, conjecture. On examination, its sides, tip and root present a red and glazed appearance, indicative, in some degree, of subacute inflammation. In this disease, the



stomach acquires the power of secreting air, which often takes place to an enormous extent; if pressed upon, towards its great arch, it will be found somewhat elastic, and if we apply the tethescope, in this situation, we shall find the stomach full of wind, and the sound of the heart in that region becomes preternaturally clear and distinct. The reason of this is obvious. The stomach being very much distended with gaseous secretion, irritates the heart, and throws it into irregular action, while its sounds are transmitted with preternatural distinctness, through the medium of the gas secreted by the stomach in its disordered state. As we said in the commencement of the description of this disease, it is produced by intemperance of various kinds, such as those with which a dissolute life is replete.

#### TREATMENT.

We shall find the appearance of the tongue of material benefit to us, in pointing out the treatment to be used in the cure of this functional disease. The whole treatment consists in the removal of the subacute inflammation of the stomach, which lies at the foundation of all this palpitation. In order to remove this low state of inflammation, counter irritation over the epigastric region is important. This must be continued for a long time. For this purpose, the Croton oil liniment will be found a good remedy. This is to be rubbed in freely, three times a day, till a full crop of pustules is raised. If the liniment is too weak, equal parts of Croton oil and turpentine, or the pure Croton oil alone, may be used. Along with the local treatment, *Dr. Carrigun* prescribes carbonate of soda, or a combination of these two with the saccharine carbonate of iron, as follows:

*Recipe* : Carbonate of Soda, ten grains.  
Bismuth Oxide, eight grains.  
White Sugar, eight grains.

Mix for a dose. This quantity should be taken, three times a day. This must be persevered in for some time, till the tongue becomes improved in appearance, the stomach loses its power of gaseous secretion, and the patient no longer complains of palpitation, or any irregularity of the heart. It will be apparently needless for me to mention, in addition to these means of cure, that the patient must be most strictly prohibited from the use of tea and all other stimulants. His diet should be of a nutritious character, and, at the same time, not stimulant, but containing animal



food in quantity and quality suited to his enfeebled digestive powers.

There is still a fourth functional affection of the heart, which is called by some writer in the *Dublin Journal*, EPILEPTIC PALPITATION, and which, strange as it may appear, is always caused by disease of the brain. It may not seem reasonable, that an affection of the brain should cause palpitation of the heart, yet it is nevertheless true. You may be consulted by one in the prime of life, who will tell you he has been troubled with palpitation of the heart, for some time, which renders him uneasy, anxious, and uncomfortable, and that it comes on when he takes exercise, or is agitated. The patient is always more or less frightened; but when you examine the heart, you find its sound perfectly natural and healthy. On questioning him as to the first appearance of this irregular action of the heart, he will tell you that, some short time ago, he was attacked with a fainting fit, which has occurred since; and that after the first attack of syncope, the palpitation began to annoy him. This is what the old writers on medicine call the *epileptic silens*—silent epilepsy. About the fainting fits themselves, the patient seems to feel not the least concern; his fears are alone directed to the palpitation, and to this he would direct your attention exclusively. These fainting fits, however, if allowed to proceed unchecked, will terminate, in a short time, in well marked and confirmed epilepsy. But they run on, in some cases, for one or two years, before the disease shows itself fully.

You will remark, that the fainting fits come on at a period of life when they should be naturally absent, from the vigor which the constitution enjoys. The inquiry naturally presents itself, from what cause do they arise? The heart, as I have said before, is perfectly natural in its action and sound, and shows no disease there. There is no symptom of irritation along the spinal column. Where, then, does the mischief spring from? The disease in the brain is the cause of all these alarming symptoms and palpitations, as well as those fits of syncope which have preceded the palpitation.

#### TREATMENT.

We have now to consider the means best adapted both to the relief of the cause and the effect. *Dr. Carrigan* says: "The medicine which I have found to possess properties most serviceable in arresting this disease, is the *digitalis purpurea*, or fox

glove. Bleeding from the arm must first be premised. To produce the best effects of the digitalis, it must be given in large doses. Two or three grains of the leaves must be given at bedtime, every night; and where the disease does not yield readily, it must be given in five grain doses, until it produces its peculiar effects upon the constitution. You will, therefore, consider this affection of the heart, as it really is, one of secondary importance; and in the selection of the remedial agents, we must proceed at once to strike at the root of the evil, where it really exists, in the brain. And not till every trace of mischief has vanished from thence, can the patient be free from these palpitations, which are to him the source of such needless alarm in themselves. He must be kept free from every source of mental irritation, as this will prolong the disease. The bowels must be kept in a soluble condition, and the diet must be light and easy of digestion.

There are a variety of other forms of this disease, which are met with by the man who is extensively engaged in the practice of medicine, that cannot be defined by any special or particular symptoms, but, nevertheless, prove troublesome to the patient and often annoy the physician whose mind is not stored with great knowledge on these distressing subjects. I shall, at least, attempt to describe them, so far as to enable the reader to detect them, and, at the same time, fortify him with the necessary remedies for their cure or alleviation. In these cases, the heart may act with great vigor, yet there is no unhealthy sound that can be detected by the stethoscope. If we examine these cases minutely, we shall find, in every one of them, evidences of venous congestion. The pulse is full and quick; the eyes are suffused; the patient feels more or less drowsy; there are sometimes a turgescence and lividity of the face, and swelling of the legs, and occasionally an inclination to faint. If these symptoms are neglected for any length of time, they will terminate in an attack of apoplexy, and, in all probability, prove fatal. It is easy to conceive why, in these cases, the heart should become affected with palpitation, in consequence of the extraordinary quantity of blood thrown into it by the sedentary habits of the patient; these palpitations being nothing more nor less than the struggles of the overloaded ventricle to discharge completely the quantity of fluid it contains.

## TREATMENT.

The treatment here is obvious and simple. Take blood from your patient, to the extent of twelve or fifteen ounces, so as to partly unload the ventricles. After that, give a purgative, so as to unload the bowels. Then you will have done everything the case requires; and, by gentle exercise in the open air and a light diet, he will soon get well.

If I have been a little tedious in my remarks and descriptions of functional diseases of the heart, my only apology is the serious responsibility that attaches itself to all who write or practise on these diseases. They should be able to distinguish each variety of the disease of so important an organ as the heart, from those diseases that so closely resemble them; more especially when the effect of making a false diagnosis may be serious to the patient, and while you are ordering a system of depletion, one of a totally different character may be necessary. In every disease, it is important to know what other affections of the same organ may resemble the one we have to treat, in order that the patient may not be made a victim to a claim of pretended knowledge, on our part, which we really do not possess.

Yet there are other functional diseases of the heart to which the young adult is subject, especially young men. The affection, in some respects, is rather curious and highly deserving attention. I have been frequently consulted, on account of this affection, by young men, especially those of sedentary habits, who spend the greater part of every day in an office or counting-room, busily employed in writing. I have also known young lads from the country, recently taken from school, attacked with it, especially if they are closely confined and taxed beyond what their strength can bear. This affection may appear at any age, from fifteen to twenty-five. It depends upon the sudden changes wrought upon the person in his habits and manners, and, not unfrequently, in the excited sexual passions:—these persons being cramped up in a dark room, where the air is stagnant, and being compelled to breathe it for ten or twelve hours every day, deprived of the wild hilarity of their school days, and free air.

In other cases, we find it associated with spinal irritation, or even dependent upon it. In these instances, it is to be found in persons of both sexes who have grown up rapidly; who, in fact, have outgrown their strength, and whose muscular system has not had sufficient time to develop itself, so as to support, with

proper firmness, the extraordinary and quick extension of the spinal column. The spinal affection, in these cases, is apt to be overlooked, until some deformity or curvature of the spine actually presents itself. It commonly sets in, with these persons, about the time of this quick growth, and is generally associated with other marks of debility. The patient will tell you that palpitations come on if he either run or walk fast; that he cannot walk any distance without feeling a sensation of weakness across the loins, extending down the legs, which, as in other affections of the heart, are often attacked with cramps; that he bleeds from the nose on every trifling exertion, and on such occasions his breathing becomes oppressed. In other instances, it makes its appearance suddenly. The patient is attacked with nightmare, from which horrible state of feeling he awakes, and finds his heart affected with violent palpitation. The alarm is given; a medical man is sent for; he thinks inflammation of the pericardium is about to set in; he bleeds his patient, and makes the matter worse than it was before. After a while, these attacks will come on while the patient is at perfect rest, or while he is lying in bed before he goes to sleep; perhaps now they are accompanied by pains shooting in the region of the heart, which, on contraction, often conveys to the patient a sensation as if the heart had grasped something,—so strong is the force with which it occasionally acts. But no matter what the loudness of sound, or the force of impulse of the heart may be, the pulse, in these cases, is always soft, weak, and perhaps more frequent than natural. It would appear that the heart did not possess power to propel the blood into the extreme vessels, with a degree of force sufficient to render the pulse full. In these cases, the irregularity of the heart's action depends upon an undue degree of nervous energy being transmitted to it, which stimulates it to frequent and violent contractions; and this irregular concentration of nervous energy upon the heart is owing to derangement of the general health, produced by the altered habits of the individual affected. In this disorder, the bowels are always confined; and, consequently, great benefit will be derived from keeping them in a soluble and healthy condition. The only diseases with which it can be confounded are, hypertrophy of the heart and contraction of the auriculo ventricular opening. From both, however, it may be readily distinguished by the absence of *bruit de sifflet*, which you never find in this disease, no matter how loud the sound, or how violent the action of the heart may be.



It is an affection in itself perfectly free from danger, though, as I have said before, it often is but a symptom of spinal irritation, which is completely unheeded both by the patient and physician, in their concern for the more vital organs, until plainly marked signs of spinal irritation make their appearance in the shape of curvature of the spine.

## TREATMENT.

In such cases, our practice must be regulated by the amount of injury or mischief present. Here our first step must be local bleeding, either by leeches or cupping, or frequently repeated blisters over the spine. Recollect, a blister on the breast or side, in these cases, will do no good, but harm. The blister must be applied immediately over the tender joints of the spine, and nowhere else. The bowels must be kept open with gentle purgatives, and a tonic plan of treatment used. (See variety *first*, of diseases of the heart.) These are well adapted to this form of the disease. But when these cases are unaccompanied by spinal irritation, the unwholesome air of the city must be exchanged for the more salubrious air of the country. The constitution must be kept up to the highest tone possible, only keeping below that of inflammatory action. As much animal food as the patient can digest must be taken, and every exertion in your power made to increase the general muscular energy; just in proportion as this is brought about, the irregular action of the heart will cease. The author has sent several young men out of the city of Louisville for a cure of this malady; and in proportion to the exercise and wholesome food taken in the country, have they recovered their health, till they were finally recovered. A romantic, hilly, or rocky country retreat, will be best, where exercise in hunting, and climbing over the hills and rocks, will give new vigor and energy to the muscular system. At the same time, live on coarse, rough, wholesome fare. In conjunction with this, a cold bath every morning, either by aspersion or shower, will be very profitable. The tartrate of iron, taken three times a day, in ten grain doses, and persevered in for several months, will be found an excellent remedy. Keeping the mind tranquil is of great importance, in these cases. Though this disorder is an unpleasant one, it is by no means dangerous. It certainly can be cured, though, in some cases where it is not well treated, it may last for years; and sometimes, in certain constitutions, under the best treatment, it will last for a year or



two. This is, however, owing to its being either neglected or badly treated in the first instance. If the mind be unquiet, it acts as a constant irritation on the heart, and keeps up the palpitation. The very hour the patient feels that his case is not a fatal one, he begins to feel better, and the palpitation lessens.

To sum up the treatment. Recollect the disorder is one of debility, the way to remove which, is to keep up the muscular energy to the highest pitch of tone, by a proper allowance of animal food, suited in quality and quantity to the digestive powers of the patient. The purely medicinal treatment will consist in regulating the state of the alimentary canal, and assisting to raise the system to a high degree of energy, by the administration of calebiates, always bearing in mind that the medical treatment is auxiliary, in a great degree, to the hygienic. Remember, also, that the disease has been induced by close confinement in an unhealthy atmosphere, and by a total and sudden change of all the habits and manners of the patient. Restore him to these, and aid him by the adoption of a proper regimen and the remedial treatment above directed, and you will, in every case, have the satisfaction of finding that, according as your patient's debility gives way to your remedies, the palpitation and irregular action of the heart will cease, leaving him in perfect possession of renovated strength and health, — the greatest blessing which you could possibly confer upon him. But should the irregular action of the heart proceed from amorous or improper sexual indulgences, or from masturbation, the remedies must be different. For the cure of this, see chapter on diseases of the prostrate gland, and involuntary nocturnal emissions.

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## BLENORRHOËA, OR SIMPLE URETHRAL RUNNING.

THIS disease is characterized by a simple increased secretion from the mucous glands of the urethra. This definition is sufficiently clear and expressive. In effect, the discharge proceeds from mere local irritation, unaccompanied by contagion or virulence of any kind, and is chiefly found in persons in whom the affected organ is in a state of debility; the occasional causes of irritation being venereal excess, or too large an indulgence in spirituous liquors, cold, topical inflammation, too frequent purging, violent exercise on horseback, rheumatic inflammation, and,

occasionally, (according to *Sir John Hunter*,) “transferred irritation of the teeth.” The matter discharged from the urethra is whitish and mild, producing no excoriation, pain in making water, or other disquiet. It is not a venereal disease, strictly speaking, in any of its shapes.

#### TREATMENT.

This disease requires nothing more for its cure, than rest, and some cooling purgatives: such as Epsom or Rochelle salts, a dose every day for three or four days, and rest; with the cold bath to the parts, three or four times a day, for a few days; a light diet, and avoiding the exciting cause.

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### BLÉNORRHŒA LUODES, OR CLAP.

THE clap, strictly so called, is characterized by a muculent discharge from the urethra or vagina, intermixed with a specific venereal virus, and burning pain in making water. It is produced by impure coition, being infectious. This is a disorder of far greater mischief and violence than simple blénorrhœa. It was for many years supposed to be a local effect of that poison, which, when communicated to the system, produces syphilis. It is, in truth, received in the same manner, and by the same organs; its medium of conveyance being that of cohabitation with an infected person. That it is a disease specifically different from syphilis, or pox, is clear from the following facts: it did not appear for more than a hundred years after that of syphilis; it will continue for any length of time without any syphilitic symptoms, which, indeed, are rarely found connected with it; and when this is the case, it is the product of a separate contagion.

Gonorrhœa, or clap, has symptoms peculiar to itself, and undoubtedly depends upon a specific virus. The chief of these symptoms are described in the definition of this disease. They are generally preceded by a troublesome itching in the glands penis in men, and in the clitoris in females, and a general sense of soreness up the whole course of the urethra; soon after which, the discharge appears in the form of a whitish pus, from the urethra. In a day or two, it increases in quantity, and becomes yellowish; and as the inflammation increases, and the disease

grows more violent, the yellow is converted into a greenish pus, and loses its purulent appearance, and is thinner and more irritating. The burning or scalding pain that takes place in making water, is usually seated about half an inch within the orifice of the urethra, at which part the passage feels perfectly straitened or contracted; hence, the urine flows in a small stream. The lips of the urethra are thickened and inflamed, and a general tightness is felt up the course of the penis. This last symptom is sometimes extremely violent, and accompanied with involuntary erection, at which time, as the frenum, in consequence of the inflammation, has lost its freedom of motion, the penis is incurvated with intolerable pain. It is to this state of the penis, in which it bears some resemblance to a hard twisted cord, that the French have given the name of *chordee*. Under these circumstances, we often meet with a troublesome phymosis, either of the strangulating or incarcerating kind, in consequence of the increased spread of the inflammation. Sometimes it extends to the bladder, the surface of which pours forth a cheesy or wheyish fluid, instead of its proper lubricous secretion, which is communicated to the urine; and sometimes the testes participates in the inflammation, becomes swollen and painful, and excites a considerable degree of fever. In females, the chief seat of affection is the vagina; but as this is a less sensible part than the urethra, the pain is seldom so pungent, except when the *meatus urinarius* and the *nymphia* associate, and participate in the inflammation. This disease appears at very different intervals after infection, according to the irritability of the constitution. The usual time is about the fourth or fifth day; but in some cases it has shown itself within the first twenty-four hours; while, in other cases, it remains dormant for two or three weeks, and even a longer time has elapsed in some rare instances. Sometimes, by the violence of the irritation, the secretion is absorbed as fast as it is effused, so that only a very small discharge takes place, while all the other symptoms are peculiarly exasperated. It was at one time imagined that the puriform fluid, which is usually poured forth in considerable abundance, proceeded from an ulcer in the urethra. But it is now well known that it is not necessary for an ulcer or an abscess to exist, in order to the formation of pus; and dissection has shown that the secretion is thrown forth from the internal membrane of the urethra, without the least appearance of ulceration, or even, in most cases, without excoriation.

TREATMENT.

The treatment for gonorrhœa is simple. The disease itself, in the first instance, is simple inflammation in the first stage: hence, the remedies used for its cure are plain and easy. If the patient be full of blood, and of a very gross habit, bleed him pretty freely from the arm. Then give the following pills:

*Recipe:* Aloes, twenty grains.  
Rhubarb, twenty grains.  
Jalap, twenty grains.  
Tartar Emetic, three grains.

Form twenty pills. Two of these must be taken every night at bedtime, and one in the morning. Follow this up for three or four days. Then take the following mixture:

*Recipe:* Balsam Copaiba, half an ounce.  
Harlaem Oil, half an ounce.

Mix. Give twenty drops, three times a day, on sugar, or in flax seed or slippery-elm tea, which drink should be used freely every day. But should the case have become inveterate before any remedy is applied, then something more powerful must be used. In addition to the pills, or in case the pills cannot be had, salts may be taken every day, and the following mixture used:

*Recipe:* Spirits Turpentine, half an ounce.  
Spirits Nitre, half an ounce.  
Balsam Copaiba, half an ounce.  
Comp. Spirits Lavender, half an ounce.  
Laudanum, two drachms.

Mix. A tea spoonful may be taken, three times a day, in mucilage, or rice-water, or sugar. If this should not remove the disease, injections may be used; but I never use them except in extreme cases.

*Recipe:* White Vitriol, ten grains.  
Sugar Lead, ten grains.

Mix, and dissolve in four ounces of water. A small quantity of this may be carefully injected into the urethra, once or twice a day. Be careful that you do not throw it too high, lest you produce a swelled testicle. Cold bathing to the perineum will be of great service in old chronic cases. If taken in time, and the remedies used faithfully, the disease may be cured in eight or ten days, and, in many instances, in less time. A new and popular remedy is the water that is contained in the green poke root. Cut the fresh root, and squeeze out the juice; cork it close in a vial; take ten drops, three times a day, in sugar. Whatever remedies may be used, the diet should be light and thin, such as

gruel, light soups, tea, milk, bread, and vegetables, with but little salt, or grease; avoid hog meat especially; and it will be better to avoid every kind of meat, and keep still, if a cure is desired in a few days. All sexual intercourse must be strictly interdicted during the cure.

For the cure of women, the same remedies are necessary; only, in their case, the vagina being the seat of the disease instead of the urethra, injections must be used. It may be composed of the same materials as for men, but of double the strength. The precaution in diet, drink, and exercise, must be observed, also in relation to sexual intercourse. In all cases, the parts must be kept clean. The blood should not be heated. No spirits of any kind should be drank. It was once the practice to let the patient drink gin, or sour wines; but the better informed part of the profession now, very justly, prohibit everything of the kind, as it only protracts the cure.

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### SYPHILIS, OR POX.

THIS is the genuine venereal disease, and is characterized by ulcers on the genitals and buboes in the groin, after the matter is absorbed. It is always produced by impure coition. After the disease becomes constitutional, ulcers appear in the throat, succeeded by copper-colored spots on the skin, and pains in the bones, and nodes. This disease is called *lues* by the old writers; the term is derived from a Greek word that signifies, "to macerate, dissolve, or corrupt." It appears to have been known to the world, at an early age, that acrimonious and poisonous materials, or humors, are secreted by the genitals at times, capable of exciting local, and perhaps constitutional affections in those who expose themselves to such poisons, by incontinent sexual intercourse. *Selsus* enumerates various diseases of the sexual organs, most of which are only referable to the source of impure sexual contact. But the hideous and alarming malady which was first noticed as proceeding from the same source, about the fifteenth century, and which has since been called almost exclusively *venereal disease*, has suppressed, till of late, all attention to these minor diseases, in the fearful contemplation of this new and fearful pestilence, to the various modifications of which most of the same organs seem to have been loosely and generally referred,—as though there were but one specific poison



issuing from this fountain, and, consequently, but one specific malady,—on which account, much confusion has arisen in the history and description of the disease. Though syphilis, in its most striking species, is commonly admitted, (as all correct history on this subject shows,) as but of comparatively recent date, *Plunk*, *Richter*, *Stoll*, and other writers of considerable eminence, show that it is of far higher antiquity. It is asserted by *Lafevre de Villebrume* to have existed eight centuries before the expedition of Columbus to America. *De Blagny* is the only writer that I now recollect, who asserts that it existed in the Mosaic age.

The keen and comprehensive mind of *Mr. John Hunter*, one of Europe's greatest surgeons, first called the attention of practitioners to the idea of different poisons and different maladies; and the subject has since been ably pursued by *Mr. Abernethy*, who has sufficiently established, that, independently of the specific disease now generally recognized by the name of syphilis, there are numerous varieties of some other diseases, and perhaps other specific diseases, produced by poisons secreted in the same region, from peculiarity of constitution, or causes not easily accounted for, which, like syphilis, are attended by primary and secondary symptoms, that often vary in their mode of origin, succession, and termination, from those of genuine syphilis, though in many instances they make a striking approach to it, and to which *Mr. Abernethy* very rationally has given the name of pseudo-syphilitic disease. With, however, the amount of actual knowledge which the medical world as yet possesses on this subject, it will be better to arrange all the diseases of this class under two heads, viz., syphilis and pseudo-syphilis, or true pox and bastard pox.

The genuine pox is known by what are called *chancre*s on the penis or scrotum; they may be situated on the glands penis, most generally on the under side, near to, or on the frenum; or they may be immediately on the edge of the urethra, or on the prepuce,—(the loose skin of the penis;)—or they may be seated on some part of the scrotum. This disease is sometimes called the *French pox*, because it was once supposed to be the gift of France to Europe. But this is uncertain. Perhaps no man now living can decide from whence it came, or how long it has been in the world. It is certain it has been in every quarter of the globe, for many centuries.

Syphilis shows itself under two distinct sets of symptoms

local and constitutional, the latter of which is commonly, but **not** always, a sequel of the former. In which way soever it is produced, it is usually by means of impure coition, though when syphilitic matter comes in contact with any part of the surface of the body where it is capable of burrowing or meeting with a little mucus, sweat, or perhaps any other natural secretion, it is capable of assimilating itself to their nature, and hence introducing itself into the system by absorption, and that without any breach of surface. Therefore, other parts, as well as the sexual organs, may become the medium of communication. No local symptoms, in some instances, may ensue. In such cases, the constitutional signs are the first to appear. The earliest evidence that infection has taken place, is the appearance of one or more minute pimples, on the penis, prepuce or scrotum of men, or the labia or nymphia of women. These pimples are of a peculiar kind, called chancres, having a hard, inflamed base, of a pale red color, and an irritable point, in which there is a small opening. This pimple ulcerates and discharges a limpid virus, which produces fresh chancres wherever it spreads. In the common mode of infection, as we have already stated, the chancre first shows itself on the prepuce, glands penis, or orifice of the urethra, in men, and the labia, nymphia, clitoris, and lower parts of the vagina, in women. This sore appears sometimes as early as the third or fourth day after coition; more generally, however, several days later, and, in some instances, where the cutaneous absorbents possess little activity, or irritability, not till a lapse of several weeks. Sometimes the chancre continues blind,—that is, it does not make an open sore, but generates into a hard and irritable wart, with which the genitals are sometimes studded as low down as the anus.

Another local symptom is the formation of buboes in one or both groins, evidently produced by the virus first deposited, or else generated by the chancre, and communicated to the glands in the groin through the medium of the lymphatics. The gland, in consequence thereof, becomes inflamed, and swells, and suppurates. This bubo, when first perceived, is small, hard, and fixed; but after a few days it becomes more diffused, with obtuse pain. It enlarges gradually, and becomes more painful, so as to render walking troublesome; and, if not opened by the lancet, bursts, after some time, and discharges a large quantity of pus from a single hollow. In some few instances, the suppurative inflammation does not follow, and the tumor, as it augments,

acquires a scirrhus hardness. Sometimes the inflammation extends by sympathy to the spermatic chord, which becomes inflamed and rigid through a great part of its course. In this case, the testicles are apt to become tender, and somewhat swollen. If any of the virus, after being secreted by any of these sores, enter the urethra by any means, its mucous membrane becomes inflamed, and pours forth a considerable quantity of pus or purulent matter, which very much resembles that in gonorrhœa, or the purulent discharge in violent sore eyes. This should not be mistaken for gonorrhœa, for the treatment for the two is very different, which you may see by turning to that disease.

Syphilis, or pox, and gonorrhœa, are two distinct diseases, produced by a specific virus, differing in their essential character from each other; and it is rarely the case that they both exist at the same time in the same person. But when such is the case, the two diseases are contracted at different times and from different individuals. Gonorrhœa never produces secondary symptoms, but syphilis always does, if it is not effectually cured in time. These symptoms are a peculiar affection of the mucous glands of the fauces and mouth, which eliminate syphilitic poison along with their proper secretion, whence the tonsils, uvula, palate and tongue, and sometimes the membrane of the nose, progressively become sore and ulcerated. The voice is rendered hoarse, and the swallowing difficult. The ulcers about the fauces are of a distinctive character, being foul and ragged, with an excavated centre, covered with a brown or whitish slough, and surrounded with a hard, red, elevated and erethimatus outline. The membrane of the conjunctiva (of the eye) next suffers in the same way, and displays an inflamed surface, with ulcerations on the eyelids and angles of the eyes. The skin is in various places covered over with copper-colored spots, which at first disquimate in scurfs, afterwards in scales, and finally in scabs; each of which leaves a foul ulcer, that gradually grows deeper, and discharges an acrid and offensive fluid. As the disease advances, irregular pains shoot through the limbs, and are felt so severely at night as to prevent sleep. By degrees, they strike into the bones, which become diseased, and hard knots or ridges rise upon them, which are called nodes, and which at length become carious. The ulcerations about the fauces spread at the same time, or even before this, to the adjoining bones of the palate and nostrils, which are gradually corroded and carried

away, so that the speech is rendered nasal and imperfect, and the nostrils are flattened to the level of the cheeks. Finally, the countenance grows sallow, and the hair falls off; the appetite is lost; the strength decays, and a low hectic fever preys upon the system, and finally destroys it.

How long the poison of syphilis will remain in the system before it is developed, or how long it may remain after it ceases to show itself in an open form, is hard to say. There are various opinions on this subject; some suppose it may be incarcerated in the system for a year or two before it breaks out. This I believe to be only a cloak for excusing some fresh infection.

*Dr. Hannaman* supposes it may remain for one or two years before it shows itself. The great *Dr. Hey*, of Leeds, whose authority is indisputable, has offered it as his opinion, that "a man may communicate the disease after all the symptoms are removed, and he is judged to be in perfect health; and that a mother who has been once affected, may convey it, notwithstanding an apparent cure, to two, three, or four children, in succession, each of whom, he supposes, will have it in a milder form than the preceding one, as if it were gradually leaving the constitution, though it still continued to show some degree of activity."

It is a little curious to pursue the writings of old authors on the subject of syphilitic infection. They say it may be received by simple contact alone, through an unbroken skin. It is generally, perhaps, thus received, in the ordinary mode of coition; but still more evidently thus in other cases, and by other organs, for "it has been very frequently caught by sucking the nipples of a wet nurse," or by infected saliva communicated by kissing, or by drinking out of a cup previously used by one whose mouth is affected by the disease, in a chronic form; and it is said to have been received by the infected breath, when the throat or fauces are diseased; and by lying in a bed which had been occupied by one badly diseased. In some of the above cases, it is necessary to suppose the existence of a cut, crack, or some other breach of surface, in the skin, and particularly about the lips, with which the syphilitic virus must have come in contact. It is very easy to conceive how much more readily it may be communicated by the insertion of a tooth from the head of one who was laboring under the disease, or by bleeding or scarifying with a lancet infected with the matter, or by the attendance of an affected midwife, who has sometimes given the disease both to the mother and the child.—(*Goode.*)



A very melancholy instance is related by *Dr. Barry*, of Cork, communicated by a woman who was in the habit of drawing the breasts of women in childbed, and who, upon examination, was found to have chancres on her lips, and on the roof of her mouth, probably caught from some impure person in the course of her vocation. From the numerous engagements of this woman, the disease had spread very widely, and the rapidity of its progress was as remarkable as the manner of its communication. "The nipple," says *Dr. Barry*, "first became highly inflamed, which soon produced an excoriation, with a discharge of a thin liquor; from whence red spreading pustules were dispersed around it, and gradually spread over the breast, and, where the poison remained uncorrected, produced ulcers. The private parts soon became inflamed, with violent itching, which terminated in chancres, that were attended with only a small discharge; and, in a short time after, pustules were spread over the whole body. It finished this course, with all these symptoms, in the space of three months. The disorder made a rapid progress in those who first received it, they not being apt to suspect an infection of this nature in their circumstances. The husbands of several had chancres, which quickly communicated the poison, and produced ulcers in the mouth, and red spreading pustules on the body. But such of them as had timely warning of the disease, before the pudenda were affected, escaped. Some infants received it from their mothers, and to the greater part of them it was fatal."

Where a wet nurse and the infant she suckles are both affected, and there is a doubt which has communicated it to the other, collateral circumstances will assist us much; but where the one, as is usually the case, has constitutional symptoms, and the other only local, the former must have had the disease longest, and, consequently, must be the source of contamination. Such, however, is the unsusceptibility of some constitutions, that the matter of syphilis, like that of smallpox, seems to have no effect upon them, and they are proof against its activity.

#### TREATMENT.

It is useless to go into a detail of all the remedies that have been used, in different ages and in different countries, for the cure of syphilis. The remedies, however, which have, from time to time, been used and extolled, are *opium*, *conium*, *belladonna*, *cicuta*, *mazerion*, *sarsaparilla*, *lobelia*, *camphor*, and a variety of the acids, especially the *nitric acid*; also *antimony* and *mercury*



in their various forms and preparations. Now, whatever virtues these medicines may possess in other countries and climates, there are none of them, but mercury, that can be depended upon in America, as a certainty, for a cure. The sarsaparilla, to be sure, will be found an assistant to this metal, in some cases and conditions of the system. If they be properly prepared and used, active cathartics, in some cases, where the disease is early attended to, together with some suitable local applications, may perform a cure. But where the disease has become constitutional, nothing but mercury can be relied on; and all who have had much experience in this country with this disease, will testify the same, let others say what they may.

A true chancre is known by the edges of the sore being hard and irregular on the margin, and the bottom rough, as if it had been nibbled out by a mouse. This is the appearance of a flat chancre. The bottom of the sore is also covered by a white matter, that sticks rather close than otherwise. But there are other forms of chancre, and the most formidable one is in the form of a small hole like a trumpet, with the little end stuck in. The surface around the hole is hard and red. They often resemble a hole, as if made with half a grain of wheat or rye buried endwise, and then extracted. This is the most difficult form of chancre to cure, and I never could cure one of these without mercury. Moreover, they produce constitutional symptoms much sooner than the flat chancre. As we have before stated, all the narcotics in the *Materia Medica* will not cure syphilis, so that secondary symptoms will not arise afterwards. If the disease is treated in the earliest stage, as soon as the chancre makes its appearance, the chancre should be touched with *lunar caustic*, so as to burn it freely. The sore should then be dressed with mercurial ointment, twice a day, till the slough comes off; the same dressing should be continued till it heals. The medicine necessary to be given internally, is, first, a full dose of *calomel* and *rhubarb*, and when properly worked off, if no signs of bubo, or swelling in the groin, appear, the disease may be prevented from becoming constitutional, by active purging, which may be effected by the following medicine. Take from twenty to thirty grains three times a day, in sweetened water, and repeat for three or four days. and live on a very light diet:

*Recipe*: Gum Gamboge, two drachms  
Bitter Apple, two drachms.  
Dragon's Tongue, two drachms  
Sal Prunell, forty grains.

Mix all intimately, and give as above directed. But if the chancre has been open for several days, and a soreness has commenced in the groin, or any swelling has appeared there, then we cannot rely on anything but mercury for a radical cure. Mercury has been used, in all its forms and preparations, for the cure of this disease. It does not matter much in what form or preparation we use it, so that the system is filled with it. There is, however, some choice, when we take into consideration the peculiarity of different constitutions, and the pursuit of the patient during the use of the article. The least dangerous preparation is *calomel*, and, at the same time, it is the most certain. It should, however, be given cautiously;—two grains at a dose, repeated morning and evening, till the mouth is made sore and the patient spits freely, is sufficient. At the same time, if the bubo be formed in the groin, the mercurial ointment should be rubbed in just below it, on the thigh, morning and evening, till it becomes soft; then it should be opened by a free incision with a lancet. The matter should be all discharged at once, and the sore should be dressed with the blue ointment. After the groins become sore, and the patient spits freely, he should take but one dose in twenty-four hours, which dose should contain only two grains of calomel. The mouth should be carefully washed, two or three times a day, and all the phlegm kept off the gums and teeth. When the inflammation is all removed from the chancres, or buboes, if they do not heal readily, they should be washed twice a day with the black wash, which is composed of fifteen grains of calomel put into an ounce of lime-water, and shaken together. Wet the sores with this twice a day, and dress them with simple cerate, if the matter is pure; if not, they should be dressed with the blue ointment. If they do not heal readily by using the black wash, the blue wash should be used. This is made of the *sulphate of copper ten grains, water one ounce*. Mix, and shake till the medicine is dissolved. Wash the sores with this, twice a day, and dress them as above directed. Sometimes these sores are very indolent; they may then be sprinkled with *Peruvian bark*, or *powdered rhubarb*, which will cause them to heal kindly. The spitting must be kept up till the sores are entirely healed, and all the poison is out of the system. It will always require from twenty to thirty days to accomplish it; during this time, the patient should live on soups, gruel, milk and bread, tea and light meats, and avoid all exposure to wet or cold;—he should not use any spirits. After the sores are all healed, he should stop taking

the mercury. He should then take something to remove all the mercury from the system. The following medicines may be relied on for that purpose. The Spanish sarsaparilla and the taraxacum. Take a drachm of each of these roots, and add to them, in a pitcher, a pint of boiling water, at bedtime. Let it stand till morning, and drink it all out the next day. This should be repeated for ten or fifteen days. This drink may be sweetened, or acidulated with a few slices of lemon. At the same time, the following pills should be taken :

*Recipe* : Scammony, twenty grains.  
Aloes, twenty grains.  
Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Ground Ginger, ten grains.  
Tartar Emetic, three grains.

Mix well, and form a pill mass with the balsam of fir. Then form twenty-five pills. Two or three of these may be taken every night at bedtime, so as to give one or two operations the next morning. The diet should be more nourishing now, and the system strengthened and built up. If the mouth does not heal kindly, or is painful, it should be frequently washed with the essence of camphor ; or, if that cannot be had, the spirits of camphor weakened with whiskey will do ; or the following mouth-water may be used :

*Recipe* : Yellow Root, one drachm.  
Water, half a pint.

Make a tea, and add to it a drachm of borax, and an ounce of white sugar, or honey. Wash the mouth frequently with this mouth-water. If the mouth is very painful, add to this mouth-water fifteen drops of creosote, or an ounce of laudanum, and use as above directed ; or take one tea spoonful of the impure pyroligneous acid, and add it to a common tumblerful of cold water. Wash the mouth frequently with this. Keep the teeth clean all the time, and they will not be injured.

The same directions will apply to a chronic form of the disease, that has not existed for more than a month or two, or even longer ; but the longer the disease has been in the system, the slower the mercury must be introduced, and the longer it must be kept up before it is stopped. When the disease has become completely chronic, and nodes have formed on the bones, as on the legs or shinbones, arms, head, &c., they should be well rubbed, twice a day, with iodine ointment. The ointment should be twenty grains to the ounce, and should be rubbed in

night and morning. I have found great benefit to result from adding twenty grains of camphor to the ointment. The same slow but progressive course of mercury is necessary, in order to effect a cure. But should the case be neglected till the bones become rotten, then the prospect of a cure is at an end. The patient will die of the disease. The bones of the nose, however, frequently fall out, and, by treatment afterwards, the patient recovers. It is in this form of the disease that the use of *opium* and *cicuta*, *belladonna* and *mazerion*, are found most useful. (See *Materia Medica*, for the dose, and manner of preparing them.)

#### PSEUDO-SYPHILIS, OR BASTARD POX.

This form of the disease is characterized by ulcers, indeterminate in their character. The symptoms are irregular in their appearance; sometimes yielding spontaneously, and variously affected by a course of mercury. This species includes a multiplicity of affections, which, in many of their signs, have a close resemblance to syphilis, but differ from it in the progress of the symptoms, as well as the means necessary for their cure.

This variety of the disease is of high antiquity. *Celsus* touches upon this subject in a very scientific manner. It has been taken up, in modern times, by *Mr. Hunter*, with all his peculiarity of exactness and perspicuity. And *Mr. Abernethy*, with his great surgical genius, has directed much attention to this form of the disease. Still later, a number of authors, both in a systematic form and in the medical periodicals, have given considerable attention to this subject. After all that has been written on it, the medical world has not been able to determine whether it is a variety of syphilis, and produced by the same poison, or whether it is a distinct species, and produced by a poison specifically its own. It was regarded by *Mr. Hunter* as a pathognomonic character of syphilis, because, "*First*, That it never ceases spontaneously. *Second*, That it is uniform and progressive in its symptoms; and, *Third*, That it is only cured by mercury."

These remarks of *Mr. Hunter* generally hold good in the United States, as well as in Europe; though it does not, in every case, require mercury to cure it. Yet it is always safest to touch the gums slightly. The sores in pseudo-syphilis are generally well defined and regular, as they are in true chancre, but they



are much larger, and not so deep; there is apt to be more of them. They are inclined to produce *bubo*, and when they do the bubo is more inflammatory than that produced by genuine chancre. I have seen the glands penis almost covered with these sores, and the inner surface of the penis also; also the labia, inside and out, of females. This form of the disease will produce secondary symptoms, as well as true syphilis, such as *nodes*, and broad, ill-conditioned ulcers, on various parts of the body. Also copper-colored spots on the skin, ulceration of the palate and throat, and a peculiar species of inflammatory sore eyes. It not unfrequently puts out an eye. The bones of the nose, and soft ends of the ribs, are liable to become diseased by it. In a word, it is a horrible disease in its sequel, if left to its own course, ungoverned by medicine.

#### TREATMENT.

If bastard pox be taken in time, and properly treated, it is easily cured. The parts should be kept perfectly cleansed, the sores washed with the black wash, or the blue wash, and the bowels should be freely purged with a full dose of calomel, and followed by a dose of Epsom salts every morning. If the sores should not improve in appearance in two or three days, a weak dilution of nitric acid, — just strong enough to smart for a few minutes, — should be used, once a day, for a few days. The patient must live light, and keep still. If this should not cure the sores, a few grains of blue mass and rhubarb should be given, so as to touch the gums slightly; but should the disease have been neglected till nodes form on the bones, then the remedy for nodes, as given in true syphilis, must be used, and the sarsaparilla and taraxacum must be taken as there directed. Should copper-colored spots appear on the skin, the decoction of the woods must be taken, — (see *Materia Medica*,) — and the eighth part of a grain of the sulphuret of mercury should be given every morning, for two or three weeks, and a tea spoonful of Epsom salts at bedtime. The diet must be light, and salt food avoided during the treatment. No spirits must be taken, and no fatiguing exercise or exposure can be allowed during the cure. All sexual intercourse must be interdicted.



## DISEASE OF THE PROSTATE GLAND, OR, MORBUS PROSTATICUS.

THIS disease is characterized by an involuntary loss of semen; vertigo; erratic pains in the loins, and different parts of the chest and back; a difficulty in discharging the urine freely; loss of appetite and sleep; great depression of spirits, and occasionally delirium. Involuntary loss of semen presents itself under various aspects, possessing different degrees of importance. Those which take place spontaneously, during sleep, in a robust and continent individual, may be useful, by removing from the economy a stimulant, which, being duly increased, might disturb the exercise of its functions. They produce, then, an effect analogous to epistaxis, which is so common and useful in the young. But they may become excessive, and outlive the wants of the system, from a sort of habit; they are then, like nasal hemorrhage, attended with inconvenience proportioned to their frequency, abundance, and the constitution of the patient, &c. They may be brought on by an undue excitation of the genital parts, arising from excess of coition, or masturbation,—onanism. The irritation persisting in the spermatic organs, after the cessation of these excesses, may keep up an excess of secretion of seminal fluid, and give rise to precipitate ejaculations, and the influence of erections that are incomplete and almost unattended with pleasure; in fine, the relaxation of the ejaculatory ducts, which very soon follows this pathological irritation, eventually induces the expulsion of the semen without the least erection or the slightest enjoyment, and this especially takes place during defecation, and the passing of the urine. The transition between these different modes of spermatic evacuations is sometimes so insensible that it is impossible for the patient, or even the practitioner, correctly to appreciate it; besides, very excessive evacuations of semen are capable of producing the same effects upon the economy, in whatever manner they may take place. The different aspects under which seminal losses may present themselves, cannot, then, be separated, either in theory, or especially in practice.

Venereal excesses and masturbation have been the subject of careful investigation by *Dr. Deslandes*, who has written upon them with elegance, and whose works exhibit much conscientiousness and research. Nocturnal pollutions are easily detected,

and not hard of cure. Unless they be sufficiently grave to compromise the health, it will not be necessary to pay much attention to them. They often exist, but most commonly escape the observation of the physician, or any special notice of the patient. I shall preserve the expressions, diurnal and nocturnal pollutions. Although seminal losses may assuredly take place in the night without erection and without any pleasurable sensation; although lascivious dreams may be followed by ejaculation after sunrise; neologism is only excusable when it has for its object the avoiding of errors, and I do not think we can be deceived in the value of these expressions, which are at the present day received only in order to avoid circumlocution. I shall call every abundant seminal evacuation, in whatever manner it takes place, *spermorrhæa*. Diurnal pollutions are not always, as is generally believed, the consequence of venereal excesses, or of vicious habits. Many other causes may provoke them; and their influence may be isolated, successive, or spontaneous. Among these causes there are some that have been already glanced at; but many are still entirely unknown. It is these which are the most dangerous, because their influence is more difficult to appreciate. In all things, the study of cases is the most important, and the most difficult. This is especially true in medicine, and particularly so in this disease; because it is principally the cause of the pollutions which is to furnish the therapeutical indications. Keeping this act in view, it is necessary to understand, as near as possible, the state of the genital organs, and the constitution of the patient, as well as his previous habits and pursuits in life. These may lead to some more probable decision in relation to the cause of spermorrhæa. These things all taken together may safely direct our treatment of this peace-killing disease. It is for the want of having carefully examined the subject, and carefully distinguishing between the causes, that propositions have been laid down upon diurnal pollutions, which have as often proved to be false as true; and that methods of treatment have been boasted of, the general application of which is sometimes useful, but very often injurious. It is, therefore, without doubt, of the greatest importance to study attentively the symptoms of pollutions. They are very variable, and may resemble a multitude of affections, the character of which is independent of the first cause of the disease; and, consequently, furnish few indications for the treatment necessary for the cure of spermorrhæa. On the other hand, the history of seminal losses is so little known, that

I feel that there is a necessity for proceeding with great caution. Indeed, if the world had not been furnished by *Lalmond* with his invaluable papers on this subject, we might now have been groping in the dark in respect to much which he has brought to light, we having been led to examine the subject more particularly by the light which he has furnished us on this subject. The facts are numerous, and the symptoms various. It, therefore, is highly important to have some order in their distribution. We shall first enumerate the most common causes; then those which are less common, but, nevertheless, equally certain in their effects; and again, there are some causes which are doubtful.

In order, then, to proceed from the evident to the doubtful, from the simple to the compound, it will be necessary to examine first those causes which are the most direct and incontestable. The most prominent among these is inflammation of the spermatic organs. Of all the causes of pollutions, the most frequent, the most direct, and the most certain, is inflammation of the organs destined to the secretion of the semen. It is also that of which it is the most easy to conceive the influence, and to find traces of after death. It is, then, with this I shall commence. Pathological anatomy has given us but little knowledge on this subject. This deficiency is owing to various causes. Inflammation of the spermatic organs does not, at its commencement, threaten life. When persons succumb during the first period of inflammation of these organs, it is in consequence of some complication of disease of a graver character, which has absorbed all the attention of the physician; and, consequently, after death, they neglect to examine the spermatic organs. When the consecutive influence of these inflammations brings on diurnal pollutions capable of causing death, the epoch of their appearance is very remote. The symptoms have been insidious, and therefore the true causes have not been suspected. Consequently, the facts necessary to develop the true cause of death are never, or rarely ever, examined. The situation of the vesicula seminalis in the body is obscure and rendered difficult of exposure, by reason of its peculiar location, being surrounded almost entirely by bony arrangement in anatomical structure. But, in order to become fully acquainted with these organs, the bony parts situated at the bottom of the pelvis must be carefully removed, and these organs examined with care. The color, consistence, and dimensions, must be carefully noted, and those things must be studied with great attention; for symptoms of the gravest character

may have been the result of lesions almost imperceptible. Thus, for example, the orifices of the excretory ducts may be frayed, or, in consequence of some slight ulceration, they may become deformed or enlarged in one way. We can readily form an idea of the consequences which would result from the destruction, even partially, of these little sphincters. The color, the consistency, the exact dimensions of the ejaculatory ducts, also furnish valuable information. The examination of all these organs requires much patience, time and address, in order to understand everything connected with them in all their aspects, and this is impossible without separating from the pelvis the portion to which all these parts are attached. But we are not writing a treatise on anatomy, and shall, therefore, proceed to give a more particular detail of the causes of this alarming disease, together with the symptoms which are its true exponents.

And *First*, Of the causes. These are various. But there are two which give rise to this disease in a proportion perhaps equal to all the rest put together; and they are, *First*, Badly treated gonorrhœa; and, *Second*, Masturbation or Onanism. Out of fifty cases reported by *Lalamond*, twenty-four were produced by either one or more gonorrhœas. Intemperance and masturbation are also fruitful causes of this peace-killing disease. It has, however, been produced by causes over which the patient had no control. Chronic piles has caused it, as also cancer of the rectum, or scrotum; fissures in the verge of the rectum; long-protracted costiveness; inflammation of the bladder, and a long-protracted diarrhœa. But, after all has been said, masturbation, and badly cured gonorrhœas have produced it oftener than all the other causes put together. *Lalamond* states that he has known ascarides—(little, white worms)—in the rectum to produce it. In more than fifty cases which the author has treated, in a few years past, three fourths or more have been brought on by masturbation, or badly treated gonorrhœa, or by both these causes combined. The symptoms are various and numerous, which, like the luxuriant branches of an ill weed, grow out of this disease, located in the prostate gland.

The first symptom to be depended upon, is the loss of semen in an unnatural way. This is often the case, and the person is not aware of it. It does not always appear in the form of nocturnal nor of diurnal pollutions; but a vast amount of semen may be lost in other ways. It is, perhaps, the most frequent in the discharge of water, when it may be detected after the last jet of



urine has passed. In a second or two, a few drops more will appear, and if the patient will catch these drops between his finger and thumb, he will find it to be sticky and ropy; or if he will notice when these last drops fall from the penis, he will find that they are more or less ropy. The orifice of the urethra will also be closed in the morning by a light-colored, sticky fluid. There is no pain in making water; but if the water be caught in a chamber the over-night, and examined the next morning, there will be found a white flocculent substance floating in the urine, not closely adherent to the vessel anywhere, but floating under the surface of the urine. This is semen. Again, if the patient will notice, after passing a costive stool, just after the stool is passed he will discover a white, ropy discharge from the penis, sometimes to the amount of half an ounce. I have known large quantities discharged in this way, and the patient had not been conscious of it till the attention was particularly directed to it. The testicle is apt to be tender, and I have generally found the left one to be oftenest affected. The urethra is also more or less tender, in some portions of it, especially near the prostrate gland.

To these symptoms are added a host of others. The bowels are apt to be constipated; the urine varies in quantity and quality, — sometimes red, or straw-colored, and hot, and again clear, free, and cool. The mind does not escape in this disease. The sympathies are great between the genital organs and the brain; hence, the brain sympathizes greatly with them, and a partial state of derangement sometimes ensues. The lungs, also, sympathize, and simulated consumption is induced; and where the disease, or exciting cause, has been complicated with intemperance, the lungs actually become diseased, and the patient dies of consumption. The stomach and all the digestive apparatus partake of the morbid sympathies of the parts originally diseased; and dyspepsia, hypochondriases, and all the long train and catalogue of symptoms belonging to these diseases, are superadded to the original malady. The patient loses his appetite, and sleeps little or none; he despises society, especially of females, and keeps far away from it; he cannot bear the company of the ladies. He chooses to wander in solitude and brood over his misery. He hates the world, and everything that is in it, and is often tempted to commit suicide — perhaps eight tenths of the self-murders that are committed grow out of the influence of this disease.



More than half the male maniacs in the lunatic asylums have the origin of their disease laid in seminal pollution; and, strange to tell, after they have been told that this disease has been the cause of all their woe, and have had the exciting cause all explained to them, yet some will resort to masturbation from three to six times in twenty-four hours. They seem to be under the complete influence of mania on this subject; they despise it, and despise themselves for it, and yet they will resort to it. The white of the eye becomes translucent, and semi-sallow, like wheyish water; the countenance looks ghastly; the appetite fails; the flesh shrinks away; and when they attempt to eat, before half a meal is taken, "they feel full, and have a sensation like iron bound round the abdomen, and they obtain no relief till they get a passage from the bowels." Despair finally seizes the soul, and the poor, unfortunate victim falls a prey to the ruthless hand of folly and debauchery. He dies of asphixia, or of apoplexy, consumption, or disease of the spinal cord, or softening and suppuration of the prostate gland. But before this takes place, his life has been a scene of woe and misery for months, or years. No refreshing sleep; no enjoyment in company; he becomes petulant and restless. The memory fails. I have known young men who could not count up twenty figures, and keep the amount in their memory. They would be compelled to carry out the figures to the side of the line, and set them down, in order to keep them correctly. If they read a page in a book, or a column in a newspaper, they cannot tell what they have read about when they get through. The truth is, they have no memory, nor have they any disposition to attend to business; in a word, such a man is unqualified for any kind of business. Finally the powers of virility become weaker and weaker, till at length all disposition of the kind is lost, and the seminal losses take place without erections.

A summary of the symptoms will be found as follows: It is only by marking closely the progressive march of the deterioration of the spermatic organs, from the first variation of their healthy action till death, that we can appreciate the always increasing influence of the seminal losses upon the whole constitution, and particularly upon the cerebro-spinal system. The symptoms produced by this last order of symptoms are well calculated to open the eyes of practitioners upon cases of this nature. The therapeutical consequences that flow from them are so grave that we cannot attach too much importance to

them. But, it may be asked, how can too great seminal losses resemble affections of the brain, or of its membranes? By what characters can we distinguish these symptoms from those which are owing to idiopathic affections? In order to discuss properly questions of this nature, it is indispensable to take into view all the parts connected with them; but, at the same time, we can compare those with which we are acquainted. In the first place, the cerebral symptoms are preceded, during a long period, by a notable derangement in the other functions. Thus, digestion is badly performed; the stomach can no longer support alcoholic drinks, highly seasoned, or too nutritious food; constipation becomes obstinate; the bowels are habitually distended with gas; coition becomes more and more rare and precipitate, then utterly impossible. The patients are discontented with themselves and others. Tormented with flatulencies, from which they want to free themselves continually, they avoid society, and its restraints. They become averse to everything that reminds them of enjoyments in which they cannot partake; they fall into profound melancholy; become irascible, misanthropic, hypochondriac. Occupied with one sole object, they manifest the greatest indifference to everything that does not relate to their health.

The functions of the brain are not more weakened than all the others, but their derangement is followed by graver consequences, and is more easily appreciated. Now we remark very soon a loss of memory; that the thread of ideas is easily interrupted, and that the least mental application causes a rush of blood to the head. It is in such dispositions that laborious digestion, a more prolonged constipation, a distension of the abdomen with gases, etc., are induced, which end by determining congestion to the weakened and fatigued brain. These congestions, unlike those of a different character, are attended with a remarkable weak pulse, with coldness of the limbs, with general uneasiness, with anxiety, with agitation in all the senses, and a remarkable desire for a change of place. These are very soon followed by paleness of the face, general debility, and alarming syncope, without one part of the body being affected more than another. Apoplectic congestions are not preceded, during tedious years, with a progressive deterioration of the economy. The pulse is full; there is tendency to repose, —to drowsiness. The derangement of ideas that we have remarked cannot be confounded with delirium. It may be

remarked, that when delirium does occur, it depends upon a true meningitis. The state of the mental functions, in many cases, bears some resemblance to dementia, but dementia is the ordinary result of mental alienation. Moreover, it is generally easy to obtain from these patients, clear and connected answers. Neither is it possible to compound the disorder of the digestive functions with the symptoms of a true inflammation of these organs. In all cases where these last have been observed, there really existed true interetis. But it is particularly on account of the alterations found in the spermatic organs, that these symptoms possess great interest. The influence of the urethra upon all the organs which open into it, is an important phenomenon in the history of diurnal pollutions. In order to have a clear idea of it, it is important to notice with what facility the inflammation extends itself, step by step, along its mucous membranes, to parts the most remote.

*Prostate.* The blenorrhagic discharges are furnished by the mucous follicles of the urethra, but especially by those of the prostate, for it is there that they are the most numerous and the most developed. It would seem that the prostate is only made up of these follicles united by cellular tissue. During the first days that follow the infection, a tickling manifests itself in the urethra, followed by itching, heat, and lancinating pains, especially while making water. The secretion of the canal increases, and changes its aspect; but it is only when the inflammation arrives at the prostate, that the discharge acquires all its intensity. It is then by that organ that it is principally furnished. Besides, post mortem examinations leave no doubt on this subject. Yet, the matter that gives rise to the disease is not deposited on the prostate, nor is it because it contains a contagious principle that the inflammation propagates itself so rapidly and promptly from the orifice of the urethra. The menstrual flux and the lochia are sometimes sufficient to provoke an abundant discharge, an obstinate running, of which the principal cause is likewise the prostate. Neither is it the transportation of this matter from one point of the mucous surface to another, that proves this propagation, for the discharge proceeds from within, outwards. Whatever it may be, the fact is constant, and it explains very well the frequency of the diseases of the prostate, in consequence of gonorrhœa. In the first stage of inflammation, eminently acute, the prostate is engorged with adherent pus, forming, by their union, a fine yellowish body, somewhat

similar to a scrofulous tubercle, while the surrounding cellular tissue is perfectly healthy, so that they can easily be isolated the one from the other, through their whole extent, and thus the nature and seat of the alterations can be determined. At a more advanced stage of the disease, the prostate is infiltrated with pus, or pultaceous matter, which can be pressed out in the form of grains, showing that the cellular tissue is already invaded by inflammation, but suppuration not yet established there. But, at a still more advanced stage of the disease, by slightly pressing the prostate, pus will fall from all its excretory ducts, and there will be found small abscesses contained within it, as large as a bean or pea. The prostate continues to enlarge, till it becomes very voluminous, and furnishes, upon pressure, an abundance of purulent matter. Now it is filled with a great number of small abscesses, and very many miliary tubercles in a dormant state finally, the prostate becomes partly destroyed, and contains in its fibrous envelopes an elastic and purulent matter, which is poured into the canal by a multitude of holes in the mucous membrane of the urethra. These holes are the orifices of the mucous follicles, whose walls had been destroyed by suppuration; hence, we see how the prostate may become gradually dissolved, and be reduced to a fibrous shell, perfectly entire, covered with a kind of sieve, whose holes vary in form and diameter, according as the secretory ducts have remained distinct, or several of them have become united into one by the destruction of the tissues that separated them. When the inflammation of the cellular tissues of the prostate is less intense, it deposits there, instead of pus, an albuminous matter which infiltrates and produces an indolent engorgement. If prompt and competent resolution does not take place, there results from it an induration of the prostate. The inflammation spoken of in the above history communicates itself to the *sper-matic organs*, to the *ejaculatory ducts*, to the *vesicula seminalis*, to the *vasa differentia*, to the *testicles*, and, finally, to the urinary organs, and from them to the kidneys; and by sympathy the lungs become affected, the liver, stomach, and the whole alimentary canal, and, finally, the spinal marrow and the brain,—and death, at last, comes as a kind messenger to release the wretched sufferer from a life of woe and indescribable misery.



## TREATMENT.

After a careful perusal of the history of this disease, it will be manifest that the remedies used for its cure must be efficient and decisive in their operation and effects, and that they should be early applied, if the subject expects to be cured without being left a wreck to the consequences of his misfortune and folly. If the disease has been produced by a badly-treated case of gonorrhœa, which is not an unfrequent occurrence, after the injudicious use of eubebs, or strong balsams, the first symptoms are such as those produced by any other cause, namely, a discharge from the urethra, after the last drops of water pass, or after a costive stool; the discharge consists of a glairy fluid, which, when caught between the finger and thumb, will be found to be stieky and ropy. Soon after this, nocturnal emissions will take place, and the patient, in the morning, after the emissions, will feel wretched and prostrate. The oftener they occur, and the longer their duration, the more miserable he will feel in the morning. If the disease be taken at this stage, it may be easily cured. The first thing necessary to be done, is to cleanse the stomach and bowels.

*Recipe :* Scammony, twenty grains.  
Cape Aloes, twenty grains.  
Rhubarb, twenty grains.  
Blue Mass, twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Two or three of these may be taken at bedtime. If they should not operate by morning, one or two more may be taken. These should be repeated every night for two or three nights; then the bulbous portion of the urethra and prostate gland should be cauterized. *Lalamond* has invented an instrument, which he calls a port-caustic, which he uses for this purpose. I have used his instrument, and find it answers very well; but I prefer one of my own invention, or, rather, an improvement on that invented by *Lalamond*. The instrument is made of hollow silver wire, of large size, curved at one end, and hollowed out on the convex side for an inch, with a small round nob on the end; the other end has a button, with a screw which fastens it on the wire,—the button being round, with a hole through it, which receives the wire, and the flat button screws on the end of the wire. This port-caustic is sheathed by a gum elastic catheter, cut off above the holes, and the end mounted with a silver ferrule a quarter of an inch long, let into



the gum elastic catheter, so as to make it smooth; the button on the end of the port-caustic fitting the end of the ferrule, so as to make a round head and a smooth surface. The other end of the elastic catheter is mounted with a silver ferrule an inch long, with a bow of silver on each side, to pull the sheath back by. The spoon in the port-caustic is filled with lunar caustic in the following manner: pulverize the caustic, and fill the spoon with it; then melt it down with a spirit lamp, and continue to fill and melt it in, till the spoon is rounded up full. Polish this down with the edge of a sharp knife, till it just fills the hole in the ferrule on the catheter. Unscrew the button on the end of the wire, and then the one that slips on the wire. Take out the wire, and fill the bowl with the caustic, as above directed; then replace it in the sheath, so that the caustic may be hid. The bowl of the port-caustic should be one third of a circle; the sheath, being of gum elastic, readily bends to suit its curve. Thus, when you have your instrument charged, you introduce it as you would a catheter for drawing off the water, till you edge the curve immediately over the prostrate gland. You then unscrew the round button which holds the port-caustic firm in the sheath, and slip the sheath off of the port-caustic. The caustic now rests upon the surface over the prostrate gland. You now, with a quick but gentle motion, turn the port-caustic to the right and left, till you have swept it over the whole surface of the gland; you then withdraw it an inch, touching the bulbous portion of the urethra; then, holding the sheath at that point firmly, you draw the port-caustic into it, and bring both out together. A little practice will enable the surgeon to use this with great facility. The instrument should be well oiled before it is used, and then introduced very cautiously, for the urethra is often very tender, and it gives more pain to introduce the instrument than to cauterize the gland. After the instrument is withdrawn, there will be an immediate desire to make water; but the water should not be allowed to pass for half an hour. In every instance, the water should be drawn off before the gland is canterized. After the operation, the bowels must be kept open with the pills first prescribed, or the blue mass may be left out, if there is any danger of salivation, and castile soap may be substituted in its place. The patient should drink freely of slippery-elm or flax-seed tea, for several days, and live on a light diet. There will be some pain in passing the water for four or five days, and, in some cases, blood will be discharged

with the water, about the second or third day; this is a favorable symptom. All the irritation will pass off in a few days, and the patient will feel like a very different man.

The operation sometimes has to be repeated from two to ten times before the cure is completed, according to the violence of the disease, the length of time it has lasted, and the peculiarity of the constitution of the patient. When it is necessary to be repeated so often, the prostrate gland is generally a mass of matter by the disease having preyed upon it for a great length of time. I have known the matter to follow the instrument for three or four successive operations. When this is the case, it will be necessary to give the hydriodate of potash, internally, in the strength of twenty grains to the ounce of water, and one drachm of the compound spirits of lavender, combined. A tea spoonful of this should be taken in water, or some mucilaginous drink, three times a day. The following mixture should also be taken: balsam copaiba and Harlaem oil, equal parts, twenty drops, three times a day, in mucilage or sugar. The constitutional symptoms must be treated as they demand,—by the citrate of iron, or the citrated aromatic wine of iron, in the usual doses, or some of the vegetable tonics. It is wrong in the extreme to bleed for cerebral symptoms, as they are sympathetic and delusive, and the more you weaken the patient, the worse they become.

The pulmonary symptoms, when the lungs become actually affected, must be treated as they demand. (See *Consumption*.) Ice cream is an excellent article of diet for such patients; it should be taken with a little sponge or tea cake. Sometimes, after the first cauterization, the patient will have an erection, though he may not have had one for months; but he must not indulge in sexual connection, although if he has had an emission, with a full erection, it is a good symptom, so that it does not occur too frequently, and he is not depressed in his feelings by it. I have cured more than fifty patients of this disease within three years, all of whom have been cured, or greatly relieved, by the above treatment. In some cases, where there has been an eruption on the skin, and especially on the hips and thighs, the bath has been used twice a week for a month; and in other cases, other remedies have been resorted to. Where the disease has been produced by *dartre*, or cracks and fissures in the verge of the anus, they must be burnt with the caustic, or cut out, before a cure can be effected; or, if it has been produced by piles, they

must be cured; or if by a disease of the bladder, that must be cured; if by masturbation, that must be abandoned; if from intemperance, it must be avoided. When these excitants have all been removed, then one or two cauterizations will effect a cure; but it is in vain to expect it till the exciting cause is removed. Marriage, as soon as the healthy tone of the parts is restored, will ensure a permanent cure. But, under any and all circumstances, sexual intercourse must be moderate. We mentioned the use of the sulphur bath, in some cases; this was used where the disease seemed to have originated from repelled itch, or some other disease of the skin, or where the skin or face was affected with numerous pimples, or there was dartre about the anus. Where the lungs were affected, I did not use the sulphur bath. Cold bathing was always injurious, until the disease was cured; then it did good as a tonic.

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## DELIRIUM TREMENS.

On this, as well as on many other subjects, practical men are found running into errors equally great with those committed by mere theorists, and, if possible, in a more blind and obstinate manner. Of these, one great error is, that opium is all-sufficient for the cure of delirium tremens. "Give opium," say they, "and you cure the disease." It is true in some cases, and, perhaps, in a majority of them; but the rule is not so absolute as it is asserted to be. In order to a rational treatment, a true understanding of the disease to be treated, is required.

Delirium tremens is usually defined as excitement with exhaustion. Excitement of the nervous system, to an extent preventive of sleep, is, to be sure, a leading feature in the disease. It must be remembered that the disease is brought on by the habitual drinking of spirituous liquors; and the subject for a time eats and sleeps but little, and is all the time tottering. Now, sleep is intended as a means of restoring all the vital powers, and particularly, supplying an additional force to the excito-motory power; and the cause of the want of sleep is a matter which has not been sufficiently attended to. Many morbid phenomena prove to us, that the sensorial functions, the functions connected with the mind, and the voluntary powers, act in some degree as a balance to the functions of the nervous system, connected with voluntary power. When the sensorial functions are excited to an excess

sive degree, the excito-motory functions become comparatively exhausted. On the other hand, when the involuntary excito-motory functions are excessively excited, as in convulsive attacks, and the voluntary powers are in abeyance, there is a state of coma, stupor, or something else approaching to it. The two cannot be long in a continual state of excitement together; the continued excitement of both leads to exhaustion of both, or one more than the other; and the great purpose of sleep is not only to refresh and strengthen the sensorial functions, but for a certain time to suspend them altogether. That is, they are altogether suspended when sleep is perfect, when there is no dreaming. Sleep is designed, not only to restore the sensorial powers, but, doubtless, to give increased energy to the excito-motory powers; for in tranquil sleep, the excito-motory function is that on which life mainly depends. The respiratory movements hang upon it, and were it to fail, sleep would become disturbed, in consequence of the person being brought to the verge of asphyxia. This is illustrated by every case, more or less, in which sleep is imperfect. Then let the whole nervous functions be exhausted, either by mental excitement, or bodily fatigue, or intoxication,—what is the result? When a person is very greatly fatigued, he is too tired to sleep,—and why? Because the excito-motory functions are exhausted, as well as the others; hence, there is not sufficient strength remaining to sleep, nor expiratory energy sufficient for the comfort of the individual. The consequence is, he soon awakes; the sleep is disturbed; he starts with a feeling of nightmare, or oppression; he has to exert his voluntary muscles, to supply by their movements what is wanting in the excito-motory functions. This is the reason of imperfect sleep from over-exhaustion.

But the excitement of the whole nervous system, which exists in delirium tremens, is not dependent alone on loss of sleep. In addition to continued irritation by alcoholic stimulants, to which the nervous system has been subjected, another cause generally operates in these cases, and that is the absence of a sufficient amount of nutrition. Habitual drunkards are always tipping, but they do not eat; they have no appetite, and the powers of digestion are exhausted or suspended by the poison of the alcohol taken into the stomach, the consequence of which is, that while they are in a state of continual intoxication they are in a state of continual starvation. Inanition is, indeed, another cause of the exhaustion of the bodily powers generally, and of excitement of



the nervous functions in particular. It is well known, that, in all cases of inanition, the bodily powers are depressed, but the nervous function is the last to suffer; it remains excited, in fact, while a general state of oppression pervades the other functions of the body. These facts have been fully set forth by the experiments of *Chossat*, on inanition: which show, that the nervous system, in these cases, is not only the last to suffer in function, but last, also, to suffer in structure, and the last to lose weight when animals are starved to death. Now we know that this cause operates in the case of habitual drunkards; we know they do not eat, from want of relish; consequently, they are in a state, with regard to the nutrition of the system, approaching to starvation. This is another reason why exhaustion ensues.

This view of the matter introduces us to another peculiarity of delirium tremens, and suggests to us another indication in the treatment in ordinary cases, which we shall now proceed to give.

#### TREATMENT.

The indications of treatment, in delirium tremens, are threefold. First, to compose the undue excitement of the nervous system which prevails, and which is exhausting to the other powers. This is done by opium and other narcotics. Opium should be given in a solid form in this disease,—from one to two grains every hour, till the nervous system is tranquillized, and the patient sleeps; or from two to four grains of hyoscyamus, repeated every two or three hours, till sleep is induced. Opium, however, is more to be relied upon when the nervous system has been calmed.

The second object is, to support those functions which are failing, and which are already so much exhausted that life may be in jeopardy. Although sleep is needed, yet strength is required to support the vital powers; and although sleep be obtained, the excito-motory function may have been brought so low that it may prove the sleep of death. It may be a reduction to a state of sinking under such circumstances, and they frequently occur in extreme cases of exhaustion, in connection with delirium tremens. It here becomes a leading desideratum to support the system with stimulants and food, if possible.

But there is a third indication, which never should be lost sight of in the treatment of this disease, and that is to purify the system from the poison that is in it. If it be a case of recent debauch, there is an alcoholic stimulant in the system, and the longer it



remains there, the more mischief it will do; and in these cases, there are other poisons besides the alcoholic stimulants, — the body becomes a source of poison to itself, and if the vital powers are greatly reduced in their energy, the process of self-purification will not go on. The excretory functions are imperfectly performed; the urine is no longer freely secreted; urea, which is a poison itself, accumulates, and the bile accumulates in like manner; and the result of all this, in an extreme degree, is to cause a poisoning of the system. It may not operate in so violent a manner as to justify the opinion that the system is overwhelmed by the poison, but it contributes greatly to its influence. As long as the secretions are defective, the nervous excitement continues. or the patient remains in a state of exhaustion, and there is an imperfect performance of the other functions. It is, therefore, a leading object to purify the system, by increasing the functional power of the secreting organs; and this is generally done, practically and safely, by means of purgatives and diuretics. The best purgatives are those that contain mercury in some form, — either in the form of *calomel* or *blue mass*. Either of these may be given, combined with *scammony*, *aloes*, or *rhubarb*, and small quantities of opium. The best diuretics are those composed of gum camphor and salts of nitre, in the proportion of one grain of each, every hour or two, given in sirup. It is not necessary to salivate in delirium tremens; but in long protracted cases of intemperance, where the liver has suffered greatly, and the ducts have closed, and the skin become jaundiced, a slow salivation, cautiously introduced, will be of much benefit.

Let every man who reads this chapter take warning, and avoid the poison that destroys both body and soul. No man can plead the use of spirits from the necessity of any case or situation in which he can be placed. It is certainly a medicine, in a few drop doses, in some cases where a potent stimulus is required; but beyond this, it never should be used. If you wish to live long, be useful, and die happy, never heat your blood with alcohol.

# MIDWIFERY,

AND

## THE DISEASES OF WOMEN AND CHILDREN

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### PART I.

#### THE PHILOSOPHY AND PHYSIOLOGY OF MIDWIFERY.

MIDWIFERY is the art of delivering the child, and all its appurtenances, from the mother. This process, which is entirely mechanical, and subject to the laws of motion, is most frequently performed by the natural powers of the organs therein concerned. No other function of the animal economy requires the concurrence of so many powers, or is so laborious and painful. The facility of its execution always depends on the united effort of many organs; and the failure of any one of them, may render it difficult, and even dangerous, both to mother and child. If the office of the midwife is in some cases reduced to that of a mere spectator, there are others in which her assistance is absolutely necessary. Sometimes it is proper to moderate the action of the natural powers, which would expel the child too suddenly; sometimes it is necessary to increase this action; and again it is necessary to open an artificial passage for the child.

To discriminate between the boundaries of duty and art; to know when to let nature, that provident mother, act; or how to assist her in a proper manner, and when to give that assistance, requires an acquaintance with all the parts of the system that are brought into action in the process of labor; the manner in which it is performed; the requisite condition of those parts; the causes which may render it difficult, and the indications which each of them points out. If this knowledge can be partly acquired by reading and study, there is much of it that can only be gained by experience.

## OF THE PARTS CONCERNED IN DELIVERY.

The parts concerned in the delivery of a child may be divided into active and passive. The active parts are, the uterus, and abdominal muscles. The passive parts are, the bones of the pelvis, and the soft parts that cover them, both within and without. We shall first speak of the latter, because the active parts are necessarily dependent upon them. And first, of the bones of the pelvis.

The pelvis proper is an irregular bony cavity, situated below the spine, or backbone, of which it forms the base, and is articulated to the inferior extremities by its union with the head of each of the thighbones. The facility of delivery always depends, more or less, on the proportion which the child's head bears to the dimensions of the pelvis. The pelvis of an adult, or grown person, is formed of four bones; the *ossa ilia*, which make up the sides, and the fore part; the *pubis*, which forms the front, or upper part; and the *sacrum*, which forms the back part. The pelvis, however, is composed of a great many more bones in the infant;—the *ossa ilia*, the *ischia*, *pubis*, the *sacrum* of five bones, called the false vertebræ, and the *coccyx* of three bones, as it is in the adult. Most of these bony pieces are soft and flexible in the child,—some of them being in a manner cartilaginous, and the edges of the others are found incrustated with a similar substance. This condition is not peculiar to the bones of the pelvis at birth, for nature follows the same rule in relation to all the parts that form the human frame. The *os ilium* is placed at the side of the pelvis, and is commonly called the hip-bone. Its form is nearly triangular. One face forms the inside, and the other the outside of the pelvis. It has three edges, the superior, anterior, and posterior; thus forming three angles. It is thought that the mere naming of these bones will be sufficient for a work of this kind, without entering into a minute description of them, and their various offices. The *os ischium* is situated nearly perpendicularly under the *ilium*. Its irregular figure renders the position of it somewhat arbitrary. It is formed of three parts, one of which forms the body, and the other two the extremities. The *pubis* or sharebone, with its fellow, forms the fore part of the pelvis. The body of this bone is almost triangular in the middle, flattened towards the place of its union with the other bones, and pretty thick at the other extremity, which makes part of the cavity for the head of the thighbone. The superior

face of the pelvis is broad behind, narrow before, and a little concave between its extremities. This forms a channel for the crural vessels, in passing from the body to the lower extremities. The superior and internal angle of the pubis is sharp, and makes a part of the brim of the pelvis. The external angle is rounded or semi-lunar, and forms a portion of the *foramen ovalæ*. The front portion of the pelvis is united by cartilage and ligaments. The branch of the pubis does not descend perpendicularly, but inclines towards the foramen ovalæ; and takes this direction much more in women than in men. This of course makes the arch of the pubis much wider in the former than in the latter; and by this form favors delivery as much as the contrary shape would retard it. We have been the more particular in the description of this bone, because it is the most important one in the pelvis of a child-bearing woman. Its shape and position should be well understood by the midwife.

All the bones described above are united, in infancy, by broad, thick cartilages. But they are of a different nature from those that form the sacro-iliac symphysis, and that of the pubis; for the former always ossify, whereas the latter never do, except by accident. And this is of very rare occurrence. The junction of the *ilium*, *ischium*, and *pelvis*, is made near the middle of the *acetabulum*, and always with so much regularity, that it can scarcely be distinguished from that bone, except it be above the cavity, where we see a line more or less salient. It often happens in children who are afflicted with rickets, before the age in which this consolidation is perfected, that the three pieces which form the *acetabulum* are pushed inwards by the head of the thighbone. This narrows the cavity of the pelvis, and renders it so irregular as often to present a great obstacle to delivery. The *os innominatum* in a woman of the ordinary size, is about six inches broad. Its height is nearly six inches and a half, taken from before, backwards, and an inch more if taken from the crista of the ilium. A knowledge of this height may serve to determine the depth of the cavity of the pelvis, from the superior to the inferior strait.

The *os sacrum* is the next bone we shall describe. This bone nearly represents an inverted pyramid, flattened, and a little bent inwards. We are to consider in it, the base, the point, the faces and edges. The base of the sacrum is upwards, and being broader before than behind, pretty nearly resembles the section of a cone. In its middle we see a cartilaginous impression of an

oblong figure, cut very obliquely from below, backwards, by means of which this bone is articulated with the last bone of the spine or back. Two little masses, which are articulated, seem to be fixed on the posterior edge of this impression, near its extremities, and form with them a channel in which the fifth pair of lumbar nerves is lodged, at their exit from the spinal marrow. The point of the sacrum presents a *facette* transversely oblong, but much smaller than that of the base, and inclined in a contrary direction; and to this the coccyx or point is united. The front surface of the sacrum describes a curve of about half an inch. Its joints are all consolidated. At each ossified joint there are two foramina or holes, one on each side, through which the sacral nerves pass. The sacrum is fixed between the ossa ilia like a wedge, with its thickest end above, and broad edge in front. The length of this bone is from four to five inches. There is, perhaps, not one variation from this rule in a hundred cases. The coccyx or point is attached to the sacrum, and is generally half an inch long, and a little bent forward. We have sometimes, however, known it to be two inches long, from morbid growth. All these bones, in the infant, are united by cartilage, and are more or less loose and movable; but by age they become ossified and permanent.

Having described the bones of the pelvis so far as is necessary in a work of this kind, we now proceed to give a short description of the muscles that are brought into immediate action by the efforts of labor. We intend to be concise on this part of the subject; inasmuch as the midwife should have a perfect knowledge of these muscles and their offices, since they have much to do in the process of labor, and frequently change its character to a great extent. It is only by a knowledge of the situation, uses, connection, the change of place, the constraint, or compression, which they suffer during pregnancy, that the greater part of the economy that prevails during that period, as well as in labor, can be explained. The pelvis making part of the abdominal cavity, is bounded superiorly by the diaphragm, or skirt, which separates that cavity from the breast; behind by the backbone, the quadrati muscles and others. These have too much to do in the process of labor to allow us to pass them by without noticing their attachments, and the relation which they bear to each other. Of these muscles, which are eleven in number, eight are attached to the breast, and three to the superior edge of the pelvis, viz., the oblique, the transverse and recti. The two



oblique and transverse on each side extend from the last true ribs, and from all the false ribs, to the crista of the os innominatum, forming three distinct planes by the direction of their fibres. Those of the external plane descend more or less obliquely from behind, forwards; those of the second from behind, forwards, and those of the third transversely, in the manner of a girdle. Each of these muscles terminates in a broad aponeurosis at its anterior point, and passing from the anterior superior spine of the ilium to the angle of the pubis, forms *Poupart's ligament*, and the *inguinal ring*. The internal oblique muscle divides into two layers; the first of which unites itself intimately with the aponeurosis of the other, and the second to that of the transverse muscles. In the sheath formed by this muscle, the recti muscles, or at least the superior two thirds of their length, are found. The muscles descend in parallel lines, from the front and lower part of the breast, to the front portion of the body of the pubis. They are thinner and broader above than below. Their lower end is attached immediately to the covering of the bone, and is protected externally by the pyramidal muscles, which arise from the pubis to the *linea alba*, or the *white line*, situated in the middle of the belly, and extending up and down. The *linea alba* separates the recti muscles, and is itself a band, formed by the junction of the oblique and transverse muscles of each side. Their fibres are so crossed and interwoven, that those of the external oblique muscles on one side, interlace with those of the other. This band is broader above than below the umbilicus, and extends from the lower end of the breastbone to the pubis. Its breadth constantly augments in the course of pregnancy, as the volume of the abdomen is increased. Towards the end of pregnancy, the recti muscles are considerably separated from each other, especially at the height of the umbilicus. Sometimes the umbilical ring is singularly opened. The *linea alba* then becomes very thin; and its separate fibres leave, in many places, considerable meshes. The abdominal muscles, independently of the motions they give the breast, exert a considerable influence over the viscera of the abdomen, and especially the uterus, in time of labor. To this process they contribute very material aid. In order to mark the place which nature has designed for each of the viscera of the abdomen, we shall only enumerate the names of the different regions belonging to it.

Of these, we reckon three. The *superior* region, (or the one above,) the *epigastric*, (or middle region,) and the *hypogas*

*tric*, (or the lower one.) We may ascertain their extent by drawing two transverse lines from one side of the abdomen to the other, at two fingers' breadth above and below the navel. Each one of these regions is subdivided into three others, one middle and two lateral; the middle is called the principal region. These are known by the names of *hypochondriac*, *lumbar*, and *iliac* regions. The greater part of the small intestines, the colon, almost all of the omentum, the kidneys, etc., are situated in the second. The other contains the cæcum; a portion of the ilium, and the colon. Some of the parts of generation which have a more immediate relation to the pelvis, require a more particular description. We find two muscles within the pelvis; the *iliacus* and the *psoas*; the former, whose fibres are radiated, covers the iliac fossa; and the other descends from the lower part of the lumbar column, over the sides of the superior strait of the pelvis, and above the socket which receives the head of the thighbone, where they join and unite themselves strictly, to be received into the little trochanter on the thighbone. There is sometimes a *psoas* muscle which accompanies the *psoas magnus*. Behind, and in the substance of the *psoas* muscles, are found the nerves which form the *obturator* and *crural*, as well as other branches furnished by the lumbar nerves, especially the first, which, following a different course, is lost in the ligaments of the groin and the adjacent parts. It is to the tension of these subaltern nerves, and their branches, that the pains which pregnant women suffer, towards the latter end of gestation, are to be attributed. Those pains are felt in the pubis, back, etc., especially if an erect or standing posture be maintained for any length of time. They are also experienced while kneeling. So also we must attribute to the obturator and crural nerves,—from the pressure they receive before their exit from the abdomen,—that weakness of the lower extremities, which makes so many pregnant women fall on their knees or breach, and which also renders their gait so unsteady. We know that the obturator and crural nerves are formed by the union of several cords, which are derived from the second, third and fourth pair of lumbar nerves; that the obturator goes out of the pelvis at the posterior and superior part of the foramen ovale, to be distributed to the muscles of the outsides of the thighs; that the crural passes out under the *ligamentum falcipii*, where it divides into a great number of branches, some of which extend downwards to the foot. Before the last lumbar vertebra, and frequently before the

fourth, we have the bifurcation of the *aorta*, and the *vena cava inferior*; and soon after the division of these branches, known by the name of the primitive branches of the *iliac* arteries, and veins, they divide into two others, one of which goes to the inferior extremities, along the inner edge of the *psoas* muscles, and the other enters into the pelvis, to rise again at the side of the obturator muscles, the glands, the *sciatica*, and the *pudica communis*. The first of the two branches of the two principal arteries, is called the external iliac, or crural artery. The second, the external or hypogastric artery. The veins are distinguished by the same names. The rectum is not the least part I propose to mention. It is situated at the left side of the sacrum, in the shape of the letter S. It partakes of the nature and structure of the colon, of which it is only a continuation. The accumulation of hardened feces often found in it, producing a variety of symptoms, makes it an organ of some note in the treatment of some diseases of pregnancy. This intestine is attached to the sacrum by a very loose cellular tissue, in which we find the sacral, as well as the *hemorrhoidal*, vessels. The extremities of the great sympathetic nerves, and especially of the sacral nerves, — the latter to the number of five pairs, — pass out of the canal of the os sacrum, through the holes which have been already noticed, in its interior face. The first three pairs, with a cord from the last two lumbar, go to form the sciatic nerves, which are distributed through the whole extent of the inferior extremities, after passing out of the pelvis at the sciatic notch. The fourth and fifth pair go only to parts within the pelvis, and to some of the muscles which surround it. It is to the compression that the child's head exerts, on some occasions, on these nerves, at their exit from the sacral holes, that the principal cramps and convulsive twitchings of the inferior extremities, which so cruelly torment some women in time of labor, are to be attributed. And to the same cause the sensation of numbness and weakness, experienced by them in those parts, is to be referred. Behind, and at the sides of the pelvis, are found the two *pyramidal muscles* of the thighs, the *sacro sciatic ligaments*, and the *ischio muscles*. A little forward is the *levator ani*, which embraces the neck of the bladder, by its anterior edge, and descending backwards, the greater number of its fibres are inserted into the semi-circumference of the rectum. Lastly, we find here the *obturator muscles*.

The *urinary bladder* is the next organ to be described. It lies

behind the ossa pubis, and to it the canal of the *urethra* belongs. Towards the latter end of gestation, it is generally found above the pubis, and the urethra then becomes parallel with the symphysis. In the middle of the pelvis is situated the *uterus* with its dependencies, of which we shall not speak particularly. All these organs are covered by the *peritoneum*. The muscles, belonging to the back, loins, thighs and legs—and much more those of the abdomen—by acting on the pelvis, and drawing it sometimes towards one side, and sometimes towards the other, may change its axis a little; and may, in other ways, also affect the mechanism of labor. The ligaments and cellular membranes—more or less loaded with fat, according to the lustiness of the woman—form a covering to the soft and hard parts, which we have included under the name of pelvis. This covering is not equally thick on all parts, because the subcutaneous membrane is thicker in some parts than in others, and cannot admit there the same quantity of adipose matter. The cellular membrane is always thinner behind, in the place which answers to the spiny tubercles of the false vertebræ of the sacrum, whatever may be the fleshiness of the subject. The ligaments present several large openings on the outside of the pelvis.

We do not deem it necessary to describe the organs of generation, either external or internal. Suffice it to say, that every midwife should understand their structure. The uterus, in an unimpregnated state, is very much like a flattened pear, three inches long, two and a half wide, and one inch thick, with a projecting neck below, which points into the *vagina*; the mouth of which, somewhat resembles that of an infant with its lips a little pouted; hence it is called the mouth of the womb. The fallopian tubes are those vessels that project out from each side of the upper portion of the womb; and within their duplicates are the ovaries. The womb is divided into the fundus, body and neck. The passage to the womb is called the *vagina*. The womb and its superior appendages, are covered by the peritoneum; the smooth membrane that lines the cavity of the belly. It adheres so closely to the womb, that it would appear to be united to it; yet is not; it only envelopes it in its duplicature; this membrane is frequently the seat of fatal inflammation. The uterus is a muscular substance, and has a secreting surface internally. The cavity in an unimpregnated uterus is not larger than a common bean, a little longer than it is wide.

The arteries which are distributed to the uterus, come from



the *spermatic* and *gastric* arteries. They penetrate at the sides of the uterine, from whence they go backwards and forwards, making an infinite number of convolutions, which form numerous *areolæ* anastomosing with each other; i. e., the *spermatics* with the *hypogastrics*, and those of the right side with those of the left; some of them terminate in the veins which accompany them, and others in a particular kind of vessels, known by the name of sinuses. These sinuses form, as it were, so many reservoirs, in which the blood, deposited by the arteries, is absorbed by the veins, which return it into the general circulation again. We cannot doubt the existence of lymphatics in the uterine, which become very large in the latter period of gestation. The nerves of the uterus are derived from the renal plexus; and the hypogastric, from the great internal and sacral nerves.

Considering these numerous sources, and the communication of these nerves, we ought neither to be surprised at the extraordinary sympathy of this organ with all other parts of the body, nor at the variety of symptoms produced by the diseases that affect it.

The ligaments of the uterus are four: two broad, and two round. The broad ligaments are folds of the peritoneum; they divide the pelvis transversely, and contain the uterus between them. They unite at the sides of this organ, and form, as it were, two wings. Their use is to fix the uterus in the centre of the pelvis. At their superior edge, the fallopian tubes are developed; and at their inferior, the ovaria. Through the cellular membrane which connects these two folds of the peritoneum, the different blood-vessels and lymphatics run. We there also observe two cords, one on each side, called the round ligaments, which descend from the superior angle of the uterus, before and a little below the beginning of the tubes. These ligaments bend towards the pubis, and pass out through the rings of the oblique muscles. They unite into many branches, and, forming a kind of crow-foot, lose themselves in the cellular substance. There are also two other ligaments, called the round ligaments, which are also folds or duplicatures of the peritoneum. Their use is the same as that of the broad ligaments.

The *fallopian tubes* are two conduits which take a winding course, and are three or four inches in length. Their name sufficiently describes their figure. They are so narrow at their end next the uterus, that they will scarcely admit the smallest sized bodkin; and, in some cases, not more than a hog's bristle. They



enlarge insensibly as far as their middle, where they narrow a little, and then enlarge again; but finally terminate in a kind of expansion which is bordered by a fleshy fringe. 'This extremity is loose and floating in the pelvis. 'The structure of the tubes is supposed to be the same as that of the uterus; a supposition from which many physiologists—and ourselves among the number—dissent; as they have never been known to secrete, or to be tinged with the menstuous fluid. They are capable of dilatation and contraction. One of the fleshy fringes which borders on the tubes, is attached to the ovarium; the other seems designed to dilate the tube, and apply it strictly to the use of that body. The *ovaria* are two white bodies about the size of a large bean. They are placed loosely in the broad ligaments, and are attached by a ligamentous cord to the superior and lateral parts of the uterus, behind the origin of the tubes. 'These bodies are larger in the prime of life than in advanced age. They are a little plump when the woman is fruitful; and, according to some authors, "marked with as many cicatrices, as she has had children." We know that the ovaria are necessary to the propagation of the species; for, to deprive animals of them, is to remove all power of generation. The tubes, ovaria, and broad ligaments, are supplied by the spermatic vessels, which form, by their division, in the female, as they do in the male, a kind of body like a vine, from whence the different branches go to their destination. The vagina is the natural passage to the uterus, and is capable of great alteration, according to circumstances; but always resumes its primitive condition when these circumstances are removed. The anterior is shorter than the posterior portion of this organ. Its structure, however, is perhaps not well understood. Some give it a fleshy coat; while others, perhaps, without better reason, give it but two membranes. It seems to be put up in ringlets or folds; an arrangement which shows the wisdom of Nature, displayed in its formation. Between these two membranes run a considerable number of blood-vessels; and there also we find a great number of glands which secrete a lubricating fluid.

We have now given as full a description of all the parts concerned in labor, as we think is necessary to enable the midwife to discharge her duty; as such, to herself and her patient. Let it be recollected that no midwife is qualified to practise her art without at least a partial knowledge of these parts, and their functions.

## OF THE SIGNS OF PREGNANCY.

This, as all will admit, is a subject of great importance; and the question, is the woman pregnant, or not, is one of more moment than may be at first supposed. A little reflection will clearly show the importance attached to it; since life, character, peace, health, correct practice, and in some cases all that is dear to life and friends, are involved in the answer. We shall, therefore, bestow upon it particular attention; and give the signs minutely, which show themselves in a few months after the woman becomes pregnant.

*First.*—A suspension of the menses in a married woman may justly give rise to the supposition that she is pregnant; and, as a general sign, it may be looked upon as one of the most unequivocal character. Yet a variety of causes, independent of pregnancy, may, and often do, produce the same effect; in the married and unmarried woman.

The *first* of these causes is exposure to cold at or about the time the menses should appear, or immediately after they have appeared. In the next place, certain chronic diseases, such as consumption, scirrhus of the liver, or some other important organ of the system, may produce the same effect. Again, sudden and inordinate emotions of the mind, violent paroxysms of passions, some imperfection of the ovaries, or the tubes, or the uterus itself, and accidents, by falling or blows, may each be attended with the same result.

If the absence of the catamenia does not establish the fact of pregnancy, will their presence prove, in all cases, that a female is not pregnant? Not in all cases; for women frequently menstruate after they are pregnant. There are, indeed, well authenticated cases on record, where women have menstruated through the whole period of their pregnancy.

*Second.*—The second sign of pregnancy is *nausea*. Although this symptom, attended with vomiting in the morning, does exist in some cases, yet it is far from being a *certain* sign of pregnancy. It sometimes occurs where the menses are suppressed by other causes than that of pregnancy; yet, in conjunction with others, it may be said to be a sign of pregnancy.

*Third.*—Enlargement of the breasts is a very common attendant on genuine pregnancy; though it is not always so. The breasts frequently do not enlarge till after delivery. They may

swell, by the menses being checked by cold, or some other cause than that of pregnancy.

*Fourth.*—The areola, or dark circle, which is sometimes found around the nipples, is considered as equivocal in all but the first pregnancy; in which case, did this symptom present itself, we should place great dependence on it. Dr. Dewees says, "So far, I have not been deceived by this sign." It is sometimes very difficult to detect the areola, in very dark-skinned women. But the little sebaceous glands around the nipple are generally enlarged where the woman is pregnant. The breast, when examined, should hang loose; for if it be pressed with the clothes or fingers, the midwife may be deceived thereby. We do not know that any other cause of a suppression of the menses, than that of pregnancy, will produce the areola and enlarge the sebaceous glands.

*Fifth.*—The formation of milk with some women is an invariable attendant on pregnancy. In others, however, it is not produced till they are delivered. This, therefore, is not a certain sign. The milk is often secreted on any interruption of the menses. There are many well authenticated cases on record of women having given milk after the period of child-bearing had passed. There are also cases reported, on good authority, of men having given milk, by frequently applying a child to the breast. We cite an extraordinary case, related by *Dr. Dewees*, in his own language:

"I once knew a considerable quantity of milk to be secreted in the breast of a lady, who, though she had been married a number of years, had never been pregnant; but who at this time had been two years separated from her husband. She mentioned the fact of having milk in her breasts to a female friend, who, from an impression that it argued pregnancy, told it to another person as a great secret, who, in her turn, mentioned it to another friend; and thus, after having enlisted fifteen or twenty to keep the secret, it got to the ears of the lady's brother. His surprise was only equalled by his anger; and in a paroxysm of rage, he accused his sister in the most violent and indelicate terms, with incontinency, and menaced her with most direful vengeance. The lady, conscious of her innocence, desired that I should be sent for forthwith, and insisted that her brother should not leave the room till I arrived. Some time elapsed before this could be accomplished, as we were several miles from each other, during the yellow fever of 1789. During the whole of this time

she bore his threats and revilings with the most exemplary patience and silence. I at length arrived, and in the presence of the brother and a female friend, she informed me of what I have just stated; she said her object in sending for me, was to submit to such examination as I might think proper, to determine whether she was pregnant or not. She would not permit her brother to leave the chamber, and I conducted the examination without his withdrawing. This thing turned out as I had anticipated from the history, given at the moment, of her previous health. I examined her, and I pronounced her not pregnant; and she died in about eight months after, of consumption."

In this disease, the absorption of the catamenia is not an unfrequent occurrence.

*Sixth.* — Enlargement of the abdomen is a sign of pregnancy; although it is, perhaps, one of the most equivocal that has been enumerated. It may arise from several other causes. 1st. Dropsical affections of the abdomen, uterus, or ovaries. 2d. A chronic disease of the ovarium or uterus. 3d. A retention of the menses from some accidental cause. 4th. An enlargement of almost any of the abdominal viscera. 5th. Simple obstruction of the catamenia. For these reasons, but little reliance can be placed upon it, even when combined with several others. In order that mothers and midwives may be put on their guard against giving too hasty a decision on this subject, we will relate a case as given by Dr. Dewees, the facts of which are as follows: The subject was a girl, not quite fifteen years old, whose abdomen became very much enlarged. A young physician was called in to examine her. He gave it as his opinion that the girl had better retire to the country as soon as possible, that her shame might be covered by concealment. The anxious mother, not satisfied with this decision, and having but the one lovely daughter, called in Dr. Dewees. The daughter constantly averred her innocence. The doctor accordingly was sent for, and on his arrival, the following history was given him. "The daughter, between twelve and thirteen, commenced to menstruate, and continued to do so regularly, until late in the fall of 1823, (this was in 1824,) at which time she had an attack of fever. Of this she however was relieved by the usual remedies; but since which time she had not menstruated. She gradually swelled in the belly. Her stomach was much affected, especially in the morning; and her breasts were a little enlarged. I examined the breasts, and found them a little tumid, but without areolæ. The



abdomen was much enlarged, tense and hard, in consequence of a large tumor, which was confined to the left side of this cavity, which could be easily traced through its right and inferior margin. Consequently the uterus was not found enlarged; the navel was sunken, and upon an attempt to force the finger into the vagina, I found so much evidence of her virginity, that I did not persevere. Being perfectly satisfied, from the condition of the parts, that she was a virgin, I unhesitatingly, and with no common degree of pleasure, declared the poor child to be clear of the charge which was so heedlessly and cruelly preferred against her."

*Seventh.*—The seventh sign of pregnancy is the increased size of the womb. An increase in the size of the abdomen in young women, either married or single, will naturally create suspicions of pregnancy, especially when that portion of the body is smooth, elastic, and plump. Nevertheless, these signs are not always true or unequivocal. For this condition of things may arise from a dropsical state of the uterus; from disease within its cavity, as tumors, or excrescences; from moles, or from *hydatids*—i. e. water in little sacks; from a retention of the menstruous discharge, caused by the closure of the *os uteri*. There is a case related by an eminent teacher of midwifery, which occurred in a married woman, who had never been pregnant, but was then looked upon as being so. Indeed she was supposed to have passed on to the seventh month, when suddenly, without either pain or any exciting cause, a quantity of blood and water gushed from the womb; but accompanied with neither child, placenta, false conception, nor mole; and thus ended the pregnancy. The author saw a case exactly similar, in 1839, in Louisville, Ky.

*Eighth.*—The eighth sign of pregnancy is pouting of the navel. This—if it takes place early—proves that there is something behind it, which makes it protrude. But it by no means follows that it is a child. When the navel does protrude in consequence of pregnancy, it is a pretty sure sign that the pregnancy has advanced to the sixth or seventh month. But there are many other causes that may be assigned for the protrusion of the navel, as dropsy of the abdomen, bloody cancer, a chronic enlargement of the liver, and also of other parts contained in the abdomen. But a pelvis sufficiently large to let the uterus and its contents sink low down in it, will prevent the protrusion of the navel beyond the seventh month.

*Ninth.*—The ninth sign is the spitting of frothy saliva. A



spitting of very white, frothy mucus is by no means a constant attendant on pregnancy. But when it does occur, it very generally points out this condition. The spittle of a pregnant woman is very tough, and hard to free from the mouth. It is extremely white, and a little frothy; and when it is discharged upon the floor, assumes a round shape, about the size of a shilling piece. Hence the expression that the lady is spitting cotton, or English shillings. This, so far as we have remarked, is almost a certain sign of pregnancy.

*Tenth.*—The tenth sign is salivation. This is not always an attendant on pregnancy, except in a very moderate degree. Indeed, it is not very rare, though it seldom exists in excess; but when it does happen, it very clearly points out this condition. — *Dewees.* We have seen several cases of profuse salivation in girls who were not pregnant. Examination, time, and experience, proved to the contrary. And Doctor Dewees confesses, that after he had written his treatise on the subject, he met with several cases in which salivation occurred, where no pregnancy existed.

The eleventh sign of pregnancy is quickening. By this we are to understand, the first perception which the mother has of the child's muscular motion. It is to be presumed it has exerted itself in a very feeble manner, before this motion was, or could be, felt by the mother; and the time this action is perceived by her must not only vary in different women, but also in the same woman at different times, owing to the comparative strength of the child, the quantity of water around it, and the sensibility of the womb itself. The period of quickening may extend from the third to the seventh month. A very nervous woman may feel the quickening motion of a strong child at the end of the third month; while one of but little nervous sensibility, with a very feeble child, a large quantity of water, and a leucophlegmatic temperament, may not feel its motions till the sixth, and even the seventh month. The medium period, however, or the fourth month, is, perhaps, as near the truth as can well be estimated.

From what has been said, it appears that the rational signs of pregnancy may exist in combinations more or less strong, without proving its existence unequivocally, though they may leave little or no doubt of the fact. There is, therefore, but one mark by which pregnancy can be determined, and that is the certain motion of the child. In judging of this, we are not to rely on a

mere assertion; as a woman may either be deceived herself, or may have motives to mislead others. On this point we must, therefore, determine for ourselves in all cases where character or interest may be involved. To do this, it is necessary to place the hand on the bare abdomen, and wait for the motion of the child. This motion may be accelerated by first putting the hand in either hot or cold water, as the season may be hot or cold. By this means, we rarely fail to excite the child, and cause it to move; and a repetition of the same process will be attended with the same result.

Is it asked, if the absence of all motion will show that the woman is *not* pregnant, when a sufficient number of rational signs combine to show that she *is*? We answer, No:—And we are supported in the reply by Dewees, Leverett, Burns, and many others. Many authors on midwifery have testified that no motion has been experienced by the mother, even to the last week of gestation, and yet she would be delivered of a healthy, fine child. In all such cases, we must take all the signs into consideration, with all the forms of touch, before we can determine the true state of the case.

#### OF PREGNANCY.

The state of a woman who has conceived is expressed by the term, pregnancy. That state lasts from the time of conception to the exit of the body which is the result of it. We may distinguish two general species of pregnancy—true and false. True pregnancy is the result of conception, and the subsequent growth of the child. False pregnancy is caused by that of a mole or some other fleshy substance; or of a collection of blood, or water, or glairy fluid, or by the presence of wind, which is formed in the uterus. These are called pregnancies, because they are frequently accompanied by more or less of the rational signs of pregnancy; and may keep the most skilful accoucheur a long time in the greatest uncertainty concerning the true nature of the case. A true pregnancy has received different denominations, according to the place it occupies; as uterine pregnancy, ovarium pregnancy, and abdominal pregnancy. The three latter species are comprised under the name of *extra uterine pregnancy*. A single pregnancy is produced by the presence in the womb of one child. A *compound pregnancy*, by that of

two or more children. It is also a compound pregnancy when the child is accompanied with a mole. The first is often met with; the latter very seldom.

#### OF THE DISPLACEMENT OF THE UTERUS IN PREGNANCY.

There are various displacements of the uterus from pregnancy, which fortunately occur but seldom. They are, however, proper subjects of notice in this place. It is important that they be well understood, in order that the mother may attend to them, and be able to afford the relief which is necessary before the disease progresses so far that a physician must be called in to her assistance.

*First. — Of prolapsus uteri.* This is a position into which the uterus is liable to be thrown by pregnancy. Notwithstanding that organ is supported by four ligaments, yet this support is sometimes so feebly given as to render it very doubtful whether this was the express intention of nature in their formation. Be this as it may, it is certain that the uterus is subject to the impulses of the abdominal viscera, to the pressure of the distended bladder, and to the influence of the loaded rectum; to that of the sigmoid flexure of the colon, and, we may add, to the consequences of its own internal weight after conception. The last of these causes just enumerated, sinks the uterus so low in the pelvis, as to make it completely occupy the cavity of the vagina; and it sometimes discovers a disposition to escape into the world. This subjects the woman to many inconveniences; but when it is moderate, to nothing more than an unpleasant sensation, when she is in an erect position. This sensation subsides when she lies down. When the pressure is great, it creates some difficulty in making water, and in the discharge of the fæces. These inconveniences are generally relieved by keeping the bowels open for a few weeks, when the growth of the child will relieve them, by carrying the uterus up. Preserving a recumbent position for a few weeks, and living on a light diet, will generally give the relief required. Some physicians advise a pessary to be worn for the relief of these symptoms; but the remedy is worse than the disease, and should never be used. Rest, gentle medicines, and a light diet, are all that the case requires. Sometimes it becomes necessary to raise the uterus up, in order to relieve the bladder. This should be done while the patient leans a little back; and in this position

she will be able to make water. Should this fail, let the womb be raised up a little, with the finger, while the patient is in a kneeling posture.

The uterus is liable to other derangements, which are of a much more serious nature. These are the *retroversion* and *anti-version* of that organ; which positions it may assume, either in the impregnated or unimpregnated state.

#### RETROVERSION OF THE UTERUS.

Retroversion of the uterus is that state of the organ in which the fundus, or top, is thrown backwards, and is placed between the rectum and bladder, in such a manner as to be readily felt in that position by introducing one finger into the vagina and another into the rectum, while the neck of the womb is raised up behind the symphysis pubis. This disease was not distinctly known, till Doctor William Hunter, in 1754, favored the world with an account of it, accompanied with accurate drawings of the parts. Since that time, it has claimed much attention, and is now perfectly understood by all well instructed midwives. It is not, however, regarded as of equal consequence by all. While Hunter, Boudeloque, Magrier, Burns, and many others, look upon it as an accident of serious moment; others, as Denman, and Meriman, regard it with almost careless indifference. For ourselves, we view it as a disease of the utmost consequence; and presume all who have seen many cases of it, will so regard it. It generally takes place between the second and fourth month of pregnancy, after which period, the length and thickness of the womb will exceed that of the superior strait of the pelvis. In this condition, the womb cannot, of course, turn over or fold down upon itself.

The remote cause of this complaint may be anything that will depress the fundus of the uterus. It may be external violence, as blows, pressure, sudden and fatiguing exercise, or violent efforts to vomit; severe coughing, or an over-distended bladder; or an unusual accumulation of fæces in the rectum or colon. Some one or more of these causes may operate suddenly, so as to produce this disease in a very short time, or they may operate slowly, and bring on their effects more gradually.

The symptoms are more or less violent, according to the size the uterus may have acquired, or as the displacement may have been suddenly or slowly produced. When suddenly induced, the symptoms are generally violent and alarming, such as an immediate suppression of urine, or a difficulty in its passage: and

sometimes a entire stoppage of the fæces; alternate pains, accompanied by great forcing or bearing down; a disposition to faint, &c. When considerable time elapses in completing this displacement, the evils arising from it are less urgent and severe, because the parts gradually become accustomed to their new situation. But, in either case, if the uterus be not restored, the symptoms go on to increase; and instead of a difficulty and frequent inclination to make water, the urine will be totally suppressed; accompanied, however, with a constant desire, but without the ability, to pass it. As the child continues to increase in size, the uterus, of course, continues to develop itself; thus preserving a continual pressure on the parts with which it is in contact. Experience has abundantly shown, if the fundus be not restored, the uterus will continue to augment, till at last it will occupy the whole cavity of the pelvis. This distinctly points out the time for the restoration of the fundus. It should never be allowed to remain in an antverted position to a later period of pregnancy.

TREATMENT.—We shall first give Doctor Denman's treatment. He says, "This disease is produced by a fulness of the bladder;" and consequently, considers it of but little importance. He recommends the emptying of the bladder, and doing but little more; we may then bring the matter to an issue. If the uterus, when retroverted, can be replaced by art, without using much force, or the risk of much mischief, its immediate reposition, though not absolutely necessary, is at all times an event to be wished for; as further apprehension and trouble are prevented, the safety of the patient insured, and her mind quieted. But when the uterus cannot be replaced, it seems more justifiable "to wait for its return, and satisfy ourselves by watching and relieving its urgent symptoms. We shall also find the longer the attempt is delayed to replace the uterus, the easier it will be performed, and the more successful it will be when performed."

We differ from Dr. Denman on this subject, and believe that all diseases should be attended to in their earliest stage. The sacrifice of the patient's comfort, and, in many cases, the endangering of life itself, must necessarily be the result of a different mode of practice.

As the most urgent symptom in retroversion of the uterus, is a suppression of the urine, we should seriously endeavor to prevent its continuing; and, in all cases, the consequences of delay should be candidly stated to the patient. Should she permit a false delicacy to interrupt this important point of duty, the catheter should



first be employed to empty the bladder. The bowels should also be opened daily, by gentle medicines, or injections. If this treatment should not succeed in restoring the uterus to its proper place in a short time, we should then maturely consider the propriety of reducing it mechanically. The period of gestation, and the development of the uterus must be taken into consideration, with the nature and severity of the present symptoms, as a settled and invariable rule. The nearer gestation approaches the fourth month, the greater will be the necessity of reducing the uterus, and restoring the fundus to its proper place. The difficulty will increase daily after this period, on account of the rapid growth of the child. The degree of the expansion of the uterus must be taken into consideration; for the uterus of one woman may expand as much in three months as that of another will in four; consequently, we cannot delay so long in the former as we can in the latter instance. In all cases, however, we must be governed by the symptoms. When the suppression of urine is constant, and difficult to be overcome by the catheter, we should not delay, lest mischief follow. The bladder may become inflamed, or it may mortify, or burst. From its organization, that organ cannot bear distension beyond a certain time, without suffering serious mischief. In every instance, therefore, the uterus should be restored within, or by, the fourth month. Nothing, we think, can justify a longer delay; more especially if it proceed from the vain hope that nature will relieve herself at the end of gestation. Every difficulty, however, that occurs with pregnant women in making water, does not proceed from a retroverted uterus. But when the ordinary means—such as tea made of water-melon or pumpkin-seed—fail to give relief, then use the following:

*Recipe:* Uva Ursi, one ounce.

Boil these leaves to a strong tea, in a pint of water, and give a tea cup half full every fifteen minutes. Half a tea spoonful of the drops mentioned below may be mixed in at each dose:

*Recipe:* Sweet Spirits Nitre, one ounce.  
Elixir of Paregoric, two drachms.

Mixed; or,

*Recipe:* Carbonate of Potash, two drachms.  
Salts of Nitre, one drachm.

Mixed. Dissolve this powder in a pint of slippery-elm, or flax-seed, or marsh-mallow tea, and give a tea cupful every half hour. The bowels should be freely opened by the following powder:

*Recipe:* Rochelle Salts, one ounce.  
Cream Tartar, half ounce.

Mixed. To be dissolved in a gill of warm water, and taken at two drinks, half an hour apart. And if these medicines fail to give relief, or if the relief be but partial, and the suppression should recur again, we should then suspect a retroversion of the uterus, and consequently make an examination as directed in a former part of this chapter; and if the fundus be found to be thrown backwards, and the mouth of the womb forwards and upwards against the pubis, the rectum pressed by the former, and the bladder by the latter, it may be taken as satisfactory proof that retroversion exists. The water must be drawn off by a catheter before an attempt is made to reduce the uterus. Some physicians rely exclusively on this simple means for a cure. We have not, however, known it to succeed alone, in thirty years' practice.

A strong objection is raised to replacing the uterus, because, when *badly performed*, there is danger of producing abortion. This is true; but when it is performed in a proper manner, by a skilful physician or midwife, there is comparatively no danger. We grant that even then,—one time in fifty or a hundred,—abortion may follow after the best operators; but is not even this better than that mother and child should both be lost when labor comes on? We have witnessed a few cases of labor supervening, with a retroverted uterus, at the full time; and the result was fatal both to mother and child. Doctor Dewees says, “he never saw a case where the woman did not die.” Nor do we recollect a single author who has reported a case of the kind, that terminated favorably.

And now, having decided upon the necessity of rectifying the womb in case of its retroversion, we proceed to give directions for performing the operation. The first thing to be done is to draw off the water with a gum elastic catheter. The catheter should be introduced slowly and cautiously, till it reaches the bladder. If the water should not flow freely, it may be gently pressed above the pubis, till that fluid is all discharged. During this operation, the patient should lie on her back, with her knees drawn up, and a covering, as a sheet or bedspread, drawn over her, to prevent exposure. In this position, the water should be drawn off slowly. Afterwards, the bowels should be evacuated by an injection of molasses and water, or gruel and lard. There is, however, sometimes great difficulty in passing an injection, owing to the pelvis

being filled by the retroverted uterus and its contents. After the bowels have been freely evacuated, the patient should be placed on the side of the bed, on her back, with her feet resting on two chairs, in the position for turning a child. Then, having oiled the forefinger of the left hand and two fingers of the right hand, pass that of the left hand into the rectum, and those of the right hand into the vagina. With the finger of the left hand press the fundus of the womb up; while at the same time you take the os uteri or cervix between the two fingers of the right hand, and by a simultaneous, but gentle effort, pass the fundus up, while the cervix is brought down. This effort must be continued till the uterus is replaced in its proper position. We are aware that this cannot always be done; especially when the os uteri cannot be reached with the fingers. When this is the case, and the cervix cannot thus be reached, by the cautious use of the female sound, the os uteri may be brought down. This is done by turning the curve to the pubis, and the point towards the cervix; and, cautiously fixing the point a little way within the os uteri, by a gentle but steady effort, bring the os uteri to present fairly in the vagina. But in using this instrument, great care must be taken that it does not pass into the womb. If this be done, a rupture of the membranes of that organ, or an injury to the umbilical cord, will most probably be the result. And, in either case, the loss of the child must follow.

There is a mode of operating, given in our medical periodicals, which is easy and safe, provided it succeeds. The operation consists in introducing an empty bladder into the vagina, inflating it with air by the use of a bellows, and continuing the operation till the distended bladder pushes the uterus up to its proper place. This method, to say the least of it, is well worthy of a trial. After the uterus is restored to its proper position, and the instruments employed in affecting its restoration are withdrawn, a piece of soft, fine sponge, well oiled, should be introduced into the vagina, and kept there for three or four days. All this time, the patient must be kept on her back; and, if necessary, the water should be drawn off with the catheter. The bowels must also be kept open, and the patient live on a light diet. After the sponge is removed, the vagina should be frequently washed with a strong solution of cold alum-water, till it so contracts as to prevent the womb from falling back again. The patient should avoid walking or fatigue for several days; or until the fourth month is completely passed.

## ANTIVERSION OF THE UTERUS.

In antiversion of the uterus, the fundus is thrown forwards and downwards, so as to press immediately against the posterior and inferior portion of the bladder, while its neck is carried backwards and towards the projection of the sacrum. In this displacement, the symptoms are less severe than in retroversion. This tumor being before, and the neck of the womb behind, will readily distinguish this from the former position. This displacement of the uterus has been mistaken for stone in the bladder. *Doctor Lurette* says: "The operation for stone has been absolutely performed, when there was nothing the matter but an antiversion of the womb."

The remedy consists in emptying the bladder and bowels as for retroversion; and then pushing the womb up with the fingers, till the neck comes downwards. The same treatment as in retroversion is also necessary.

## OBLIQUITY OF THE UTERUS.

The inconveniences arising from this species of derangement are sufficient to demand attention. When we consider the globe-like form which the womb constantly presents during its development; the feeble support it receives from the ligaments; and also bear in mind the angle it has to pass through in ascending the superior strait; we should not be surprised to find it fail to maintain such a position in the abdomen as will enable the axis of its fundus, and that of the opening of the pelvis, to correspond exactly with each other. If we add to this the peculiarity of several parts of the pelvis, and of its more immediate dependencies, and the influence they exert over this organ during its ascent in the abdomen, we shall soon be convinced that it is well nigh impossible for its centre to correspond with that of the pelvis. Hence, the almost constant obliquity, in some form or other, in a majority of cases of pregnancy. The obliquity may be to the right or left, or forwards. The remedy, however, is simple. It consists in wearing a pair of drawers, with a jacket laced behind attached to them. This dress should be put on before rising in the morning, and so adjusted as to keep the womb erect. In many cases, we have simply directed a jacket to be worn, reaching down to the hips, and braced by some pieces of whalebone or tough wood. This should be laced so as to keep the abdomen in its round and natural shape. For

should this be neglected, there may be some difficulty when labor comes on. (See *Labor*.)

#### OF THE TERM OF UTERO-GESTATION.

This is a subject on which much has been written by physicians, accoucheurs, and jurists. It is, in many respects, fraught with the most vital consequences. Peace, character, and fortune, are frequently involved in it. We shall, therefore, devote to it particular attention.

Much light has been thrown on this subject by what is called *comparative gestation*; i. e., by accurately noting the time that the brute creation carry their young. This can be ascertained precisely. In Europe, where stock raisers enter largely into this business, they do not suffer the connection of the sexes, except at a certain season of the year; and then only for a given length of time. This time is carefully registered in a book kept for that purpose, with the name of the animal. The day she brings forth is also recorded; so that there can be no mistake as to the time the dam carries her young. The experience of any one individual on this subject would not be satisfactory; but the experience of numbers will give all the facts we require.

*Doctor Dewees* has taken great pains to collect a fund of knowledge on this subject, both positive, negative and comparative. We shall be excused for copying largely from him in this chapter. He says: "The time a fœtus remains in utero has not been precisely determined by physiologists, even when the woman was placed under the most favorable circumstances for ascertaining it. It seems, however, from the best calculations that can be made, that nine calendar months, or forty weeks, approaches the truth so nearly, that we scarcely need desire more accuracy. We are certain, however, that it would be more accurate to specify the period of gestation by days, than by months or weeks. But there must always be a starting place, and the uncertainty of that period is always in our way, perhaps equally as much so as if we enumerated by weeks or months. There are, unquestionably, many causes that will provoke the uterus to action before the full period of utero-gestation is fully accomplished; there may be some that procrastinate the usual period. The frequency of abortion, and the occasional occurrence of premature delivery, sufficiently prove the first; and much more rare, but, nevertheless, well authenticated cases of prolonged gestation, put the latter almost beyond dispute. Of the prema-



ture, however, we may remark, that we have known several instances where the labor habitually occurred before the full period. With one lady, it always happened at the seventh month; and in two others, it regularly took place at the eighth month of pregnancy. Of the protracted period, we have known still more instances where every circumstance and calculation rendered it nearly certain that the woman carried her child ten months, and, perhaps, over that time. We have no certain sign by which to judge when conception certainly does take place. There are many popular errors on this subject. All appeals by the woman to particular sensations felt at the time, should be very guardedly received, for we are certain they cannot be relied on. Enjoyment and indifference are alike fallacious; nor are certain nervous sensations, tremblings, nausea, palpitation of the heart, with some other sensations, to be relied on. Consequently, we cannot ascertain with certainty the precise time of conception; therefore, we cannot make a minute calculation how long she may carry the child. The cessation of the menses and the sensation of quickening are, perhaps, as certain rules to be governed by as any others. Yet these are not absolutely certain; for a woman may conceive at any part of the menstrual interval, and she may quicken at various periods of gestation. It is generally supposed the most favorable period for conception is, soon after the menstrual period has passed; perhaps this is so as a general rule, but it certainly is liable to exceptions. A latitude of from two to three weeks must be allowed, and this places the matter in uncertainty." But opportunities have occurred, where the most perfect accuracy must have prevailed. One of these cases Dr. Dewees records. He says: "Many years ago, the husband of a lady who was obliged to absent himself for several months, in consequence of the embarrassment of his affairs, returned one night, clandestinely, his visit being only known to his wife, his mother, and myself. The consequence of this visit was the impregnation of his wife. The lady was, at this time, within one week of her menstrual period; and, as this took place, as usual, she was led to hope that she did not suffer by this visit of her husband. But the catamenia not appearing at its next regular time, gave rise to fears that she had not escaped; and the birth of a child, nine months and thirteen days from the time of this clandestine visit, proved her apprehensions to be well founded."

This case is remarkable for two facts. The first of which is

that a woman, in perfect health, and pregnant with a healthy child, may exceed the period of nine months, by several days. The other is, that a woman may be impregnated just before her menstrual discharge takes place, and not have it interrupted. It therefore seems that a check is not immediately given to the catamenial flow, by an ovium being impregnated. This fact, perhaps, has frequently occurred; or, at least, more frequently than is supposed, and has thus created no inconsiderable error in the calculation. *Desormeaux* relates a case where a lady had become insane, and was the mother of children. Her physician, considering that child-bearing might have a beneficial effect upon her mental disease, permitted her husband to pay her one visit; and then kept them apart for three months, in order that, if conception did take place, there should be no risk of abortion from further intercourse. The physician and the attendants made a note of the exact time the husband was permitted to visit his lady. When symptoms of pregnancy appeared, his visits were positively interdicted. The patient was closely watched by the female attendants required for her malady; and she was, moreover, a lady of the strictest morality. She was delivered at the expiration of nine calendar months and two weeks, of a small child. She was delivered by *Desormeaux* himself. (See London Medical Gazetee, Dec. 12, 1839, page 344.)

Thus we see the term of utero-gestation is not definitely marked by an unalterable law of nature; and the condition of the uterus and child are not so clearly definable as we could wish. One thing we do know, that it is an established law. But it is also certain that this law arises from conditions that develop themselves, sometimes sooner and sometimes later. We have reason to believe the development of the fœtus has something to do in bringing about this process; but this is hard to define, inasmuch as so many exceptions present themselves to the general rules which are supposed to govern this subject. Many ingenious hypotheses have been proposed by writers on this subject, to explain this interesting phenomenon; but all have failed to be entirely satisfactory, from the existence of one fact, viz., that, in cases of extra-uterine pregnancy, the uterus is as certain to be thrown into painful contractions of shorter or longer continuance, as if the child had been contained within the womb. To these we may add the few cases of extended gestation. If those cases have been faithfully related—and, as far as we can judge, there does not appear to be any rational ground

to suspect their fidelity—they must at once set aside the ingenious speculations of the theorists. Let the exact period be what it may, sufficient has been ascertained to fix the period at, or near, nine months. In making calculations, it is best to allow a little time over that which the mere stopping of the menses would indicate. For, as a general rule, it will be found that more women conceive a few days after this evacuation has ceased than at any other period.

We are aware that much doubt has been entertained, and much wit expended upon the testimony which accoucheurs have borne upon the absolute duration of human gestation; especially since the discrepancy of the evidence given by seventeen professional gentlemen in the celebrated *Gardner Peerage Case*, in England. But it should be borne in mind, that doubt is not proof, nor is wit argument. Neither should be permitted to have an undue influence. Yet we are disposed to grant that all testimony opposed to the general laws of nature on this subject, should be admitted with great caution, and only after strict examination; for were the plea of an unusual extension of the term of utero-gestation made a common one, or admitted with too much facility, the consequences would be both extensive and mischievous. But this cannot very well happen under its present limitations. Public opinion, as well as observations generally believed to be correct, are so unalterably fixed upon this point, that little danger can be apprehended from an occasional and well qualified admission of it. Nature is generally steady and uniform in her operations, and perhaps she is not more so in any than in her general scheme of impregnation. And yet it is notorious, that even in this, her favorite project, she is sometimes so whimsical, as not unfrequently to depart from absolute uniformity. How much more uniform she may be in uncivilized life, we have no data from which to judge. Nor is it essential to the investigation of the present question. It would, however, be a matter of curiosity, if not useful, information, to ascertain the degree of her uniformity, or the extent of her aberrations. As we cannot tell the cause, at all times, which brings about the contraction of the uterus, about the end of the ninth month, so we are ignorant of that which protracts it *beyond* that period. But that such departures take place, from time to time, we cannot doubt. We believe this with more readiness because it is not confined to the human species alone. If we are to believe *Tepier*, he found as great departures from the ordinary rule in the infe-

rior animals to which his experiments were directed, as are declared to occur with the human female. As the observations of the naturalist are highly curious, and not generally known, we will give them in detail. We regard them as furnishing an argument from analogy, in favor of the opinions we are endeavoring to support. They are as follows:

"In five hundred and twenty-five cows, twenty-one calved between two hundred and forty and two hundred and seventy-five days,—average, two hundred and fifty-nine days. Five hundred and forty-four between two hundred and seventy and two hundred and ninety-nine days,—average, two hundred and eighty-two days. Ten between two hundred and ninety-nine and three hundred and twenty-one days,—average, three hundred and six days. Average of the whole, two hundred and eighty-two days. So that from the shortest to the longest period, there is a difference of eighty-one days,—i. e., more than one fourth of the average time.

"In two hundred and seventy-seven mares, with foal for the first time, twenty-three foaled between the two hundred and eighty-seventh and three hundred and twenty-ninth days,—average, three hundred and twenty-two days. Two hundred and twenty-six between the three hundred and twenty-ninth and three hundred and sixtieth days,—average, three hundred and forty-six days; and twenty-eight between three hundred and sixty and four hundred and nineteen days,—average, three hundred and seventy-two days. Average of the whole, three hundred and forty-seven days. Difference between the extremes, one hundred and thirty-two days.

"In one hundred and seventy mares, which had foaled before, twenty-eight foaled between two hundred and ninety and three hundred and twenty-nine days,—average, three hundred and twenty-one days; one hundred and twenty-eight between the three hundred and twenty-ninth and three hundred and sixtieth days,—average, three hundred and forty-one days; fourteen between three hundred and sixty and three hundred and seventy-seven days,—average, three hundred and seventy days. Average of the whole, three hundred and forty-one days; so that between the shortest and the longest periods, there was a period of ninety-seven days,—more than one fourth of the whole time.

"In nine hundred and twelve sheep, the average time was about one hundred and fifty-one days, and the extreme difference about twelve days.



"In twenty swine, the extreme difference was from one hundred and nine to one hundred and thirty-three days.

"In one hundred and sixty-one rabbits, the extreme in their term of gestation was from twenty-seven to thirty-five days."

Thus we see in the brutes a very considerable disparity prevails, with respect to the time of utero-gestation. And although no moral question can arise from aberrations in them, they nevertheless furnish us with interesting facts, from which most important deductions may be made in favor of the occasional extension of the term of gestation in the human female. In my mind, the period of gestation has no precise and definite limits. By this I would be understood to mean that this process is not undeviatingly fixed to the lapse of an absolute number of days. The nearest we can approach to it, is within a few days,—one way or the other,—of nine months. It is quite probable that certain conditions must prevail before natural labor can take place. These may depend upon some physiological harmonies which cannot always be exact. The functions of no one organ in the human body are so well regulated in themselves as to be unerringly exact in their performance. "I have," says *Doctor Dewees*, "every evidence on this side of absolute certainty, that the period of gestation has been prolonged ten calendar months, in an habitual arrangement, in at least four females that I have attended; that is, each one of those women went one month longer than the calculations made, after allowing ten or twelve days after the last menstrual period, and from the quickening, which was fixed at four months."

Other cases have occurred to the doctor, that convinced him that the woman had gone ten months. We have ourselves seen several cases in which the patients believed they had gone ten months; and from the manner of their calculations, we are induced to believe they did go that length of time. We, therefore, cannot doubt but it is sometimes the case; and when it does occur, no unfavorable suspicion should be permitted to rest upon the person, on that account. There are also cases, and not a few, where the woman does not go nine calendar months, but nine lunar months, or nine moons. Some, indeed, never exceed that time; and yet, their children appear healthy and full-grown. In illustration of these facts, we present a few cases, where the uterus lost its expulsive power, and the woman carried a dead child for many months.

The first case is related by Mr. Parker, as given by *Dr. Dewees*.



"A woman, aged twenty-seven years, though much emaciated, and very weak, in the month of October, 1820, had all the symptoms of pregnancy. About the middle of the fifth month, she began to feel the motions of the child; and at the end of the ninth month, felt the precursory pains of labor. The surgeon who was called, found the pains weak, and the os uteri not much dilated, though sufficiently so for him to feel that the vertex presented. In consequence of the extreme weakness of the patient, she was treated with permanent and diffusible stimuli; and with so much advantage, that at the end of six weeks she had gained the appearance of health, and had returned to her ordinary occupation. A few days after the coming on of the pains, the motion of the child became weaker, and eventually ceased. The size of the belly diminished, and the child appeared turned to the left side. The menses appeared in the tenth month, and returned regularly afterwards. In December, 1821, Mr. Parker was called in consultation, and advised forcible delivery, which was not consented to. In October, 1822, he found the os uteri above the symphysis pubis, inclined a little to the right side, with the fundus to the left. The posterior surface of the uterus had descended so low in the pelvis, as not to be more than an inch and a half from the orifice of the vagina. The back and feet of the child could be felt, through the integuments of the abdomen." Such was the state of the patient in March, 1823. It is to be much regretted that the termination of this case was not given. Many comments were made on it, which it is not necessary to insert.

"Case 2nd. Mrs. A. H., aged twenty-nine years, became pregnant about the first of April, 1822. She was much afflicted, at various periods of gestation, with vomiting and spasms of the stomach. She quickened about the fourth month. After this period, her spasms were less severe; but new evils supervened, such as pains in the hips, loins, and back. About two weeks before the expected period of labor, she was attacked with the usual symptoms of this process. These symptoms continued for ten hours, and then subsided. From this time no motion of the child was felt.

"March 1st, 1823, she was attacked with what is familiarly known by the name of swelled leg, in one limb. The disease having left this, soon seized upon the other. During the first and second week of this attack, she had a discharge from the vagina, resembling the catamenia; at times this was fœtid. The os uteri was closed. No portion of the child could be felt; and the abdomen was very tense. About the 12th of March, she began to

recover, and was soon able to walk some distance without fatigue. From the first of April, her convalescence was rapid. The tumefaction of the abdomen began to subside. She appeared to be as large as at the seventh month.

"June 10th. Catamenia healthy. Subsidence of the protrusion of the abdomen. November, 1823. Nothing remarkable has occurred up to this period. Abdomen nearly of its natural size. A small tumor of the shape and size of a child's head remains. Two weeks after the supposed death of the child, milk was secreted; and continued in small quantities till October. April 10th, 1824, she was attacked with pain, vomiting, cough, &c., and continued in this way until the 24th of May, when she died.

"*Dissection.* Upon opening the abdomen, the uterus was discovered to be very much thickened, and presented an appearance of having been inflamed, and to have suppurated. It adhered closely to all the surrounding parts and organs. An incision was made through the anterior, or face of the uterus, and a full grown child was discovered." (See Dr. Dewees' Work on Midwifery.)

We leave these cases without any further comment than to say, that they prove that the uterus may carry a fœtus beyond the usual period, and yet the mother survive it for a long time.

Our only apology for the length of this chapter is its importance.

## PART II.

### OF THE DISEASES OF PREGNANCY.

*First—Of the febrile state.* It is true that the blood of a pregnant woman differs from the blood of one that is not pregnant. This difference consists in its inflammatory appearance; but whether it is produced by an inflamed state of the blood, is a question which we shall not now discuss. That there is a febrile condition of the system in pregnancy, is known to all experienced physicians; and that this inflammatory state of the blood is produced by an increase of arterial action, is, we think, very evident. But, notwithstanding there is an excited state of the arterial system, it must not, from pregnancy alone, be looked upon as showing a morbid condition of the circulation. For were this always to be rigorously inferred and acted upon, much mischief might be done. Even as it is, women often suffer from the injudicious use of the lancet, as well as the too frequent use of active cathartics. It should only be considered a disease,

when it is accompanied by fever; or in local determinations giving rise to other symptoms, as headache, imperfect vision, difficulty of breathing, a full, bounding pulse, a hot, dry skin; more especially if they increase in strength, either in the morning or evening. When either of these symptoms presents itself the patient requires medicine. Bleeding from the arm, a light diet, and some one of the medicines prescribed below, would be beneficial.

*Recipe:* Aloes Socotrine, twenty grains.  
Pulv. Rhubarb, twenty grains.  
Castile Soap, ten grains.

Form twelve pills. Take four of them at once. Wait four hours; and then, if they should not operate, take two more, every two hours after, until they do operate. Or,

*Recipe:* Pulv. Scammony, ten grains.  
Pulv. Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Tartar Emetic, one grain.

Form twelve pills. To be taken as above directed, till they operate well. Or,

*Recipe:* Fol. Senna, one ounce.  
Rochelle Salts, half ounce.

Boil the leaves in a pint of water, to strong tea. Strain it off, and dissolve the salts in it. Take half a tea cupful every half hour, till free purging is induced. Sweeten the tea if it is desirable. Or,

*Recipe:* Castor Oil, one ounce.

This may be taken in warm coffee, or in vinegar and water, warmed and sweetened. Some one of these medicines may be taken every day, till the fever and pain are removed. The diet should be light; the drink, cold water. Should the stomach be acid, the following medicine may be taken:

*Recipe:* Calcined Magnesia, two drachms for a dose.

Mix the magnesia in sweetened vinegar and water, or add to it a few drops of lemon or orange juice.

The following medicines may be used, if preferred:

*Recipe:* Pulv. Rhubarb, one drachm.  
Castile Soap, one drachm.  
Ol. Sassafras, two drops.

Form ten pills. Take two at bedtime, and one in the morning, and repeat for a week. Or,

*Recipe* : Scammony,  
 Aloes Socotrine,  
 Pulv. Rhubarb,  
 Castile Soap, — of each, twenty grains  
 Tartar Emetic, one grain.

Form twenty pills. Take two or three every night at bed-time, till the acidity is removed. If the patient vomit much, from an accumulation of acid on the stomach, take the following medicine :

*Recipe* : Super-Carbonate of Soda, one ounce.  
 Tartaric Acid, three drachms.

Mix, and inclose them in an air-tight vial. Take a tea spoonful in water, and repeat every half hour till the acidity is removed. After this, take the pills as above directed, till the secretions are corrected.

All stimulating substances should be carefully avoided, as well as all fatiguing exercise. Errors in diet are often committed by pregnant women. There is a false notion in the world, that females in that condition should eat heartily, in order to support the child. But, than this practice, nothing can be more injurious. During pregnancy, women are naturally inclined to become fleshy; and if they eat heartily, they lay themselves liable to fever, headache, and sometimes to convulsion, or apoplexy. In a few words, *live light, keep cool, keep the bowels open, avoid fatigue, drink water only*, and you need fear no evils.

*Secondly—Of vomiting during pregnancy.* It will be recollected that this was considered one of the rational signs of pregnancy. It would seem to be one of the efforts of nature to relieve plethora; and if this is the case, its advantages are confined to the early stage of pregnancy. When it continues after quickening, or renews itself towards the latter stage of gestation, it is sometimes attended with bad consequences. Vomiting in pregnancy is thought by some physicians to be an advantage both to mother and child. From those who think it advantageous to the child, we are compelled to differ. But so far as it has a tendency to throw off the superabundance of food—to which, perhaps, a morbid appetite may have tempted—and thereby prevent too great a formation of blood, and thus reduce the size and weight of the muscles, we grant it may be of service,—but no further. And this can only be necessary in those cases where the muscles are large and full. In the latter months of pregnancy, the increasing demands of the child generally keep down the plethora of the mother, if she be prudent in her diet.

If vomiting is suffered to continue to the latter end of gestation, it will be more difficult to remove. The nausea commonly comes on soon after rising in the morning, and is succeeded by vomiting, which may last for three or four hours. The matter thus thrown up is, generally, a sour, tenacious mucus. But it sometimes consists of a thin acid water, which is at times so pungent, as almost to skin the throat, and put the teeth on edge. Bile is also occasionally discharged in considerable quantities. And when this symptom presents itself, the following medicine should be given :

*Recipe* : Pulv. Ipecac., twenty grains.

Mix this powder in a tea cupful of warm water, and give two large spoonfuls every fifteen minutes, till vomiting is produced. Drink freely of warm water, till three or four discharges have been effected. A little gruel, or a tea spoonful of magnesia in sweetened vinegar and water, may then be taken, to turn its effects on the bowels.

The following preparation may also be used.

*Recipe* : Camomile Flowers, two drachms.

Steep these in a pint of hot water, and drink the tea at four draughts, fifteen minutes apart. This will puke gently, and throw off the bile. If neither of the above articles can be had, a glass of warm water, with a tea spoonful of table salt, will answer the same purpose.

The patient is sometimes harassed for weeks with a sick stomach, but does not vomit much. She frequently retches without being able to effect a discharge. In this case, a crust of corn bread and a little milk and water should be used as a diet. A pill, prepared from the following medicines, should be taken every night :

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Pulv. Ginger, ten grains.

Form thirty pills. Or, if one should not be enough, as many as will operate once or twice the next morning.

*Recipe* : Huxham's Tincture, two ounces.

A tea spoonful of this tincture, in a little sweetened water, should be taken before breakfast, dinner, and supper. Or :

*Recipe* : Tinct. Nux Vomica, half ounce



Eight of these drops, in sweetened water, three times a day, will be sufficient for a dose; which may be gradually increased, one a day, till the number amounts to sixteen drops at a time. We have never known this remedy to fail, where the bowels were kept open by the above pills, and the diet properly regulated. But we recommend the use of other remedies before this is tried, as the strength of this medicine is sometimes uncertain, and therefore the dose may not be exactly of the right strength.

#### OF THE GENERAL CONDITION OF THE SYSTEM DURING PREGNANCY.

Almost all writers on midwifery agree that pregnancy is not a disease. It is true that the state of the system is altered; but it is not in a diseased condition. The uterus should be, and generally is, free from disease during pregnancy. But the healthy action of a pregnant uterus may produce disease in some other organ or organs of the system. This state of the uterus seems, indeed, to be necessary, in order that the rational signs of pregnancy may be made manifest. It is generally found that those women who have a majority of these signs, in a mild degree, fare better through the whole course of gestation, and have more favorable labor, than those in whom they do not present themselves. Yet have we known women, having none of these signs, who nevertheless did well in labor, and had a speedy recovery.

#### OF THE INDULGENCE OF TEMPER AND HABIT DURING PREGNANCY.

The subject which we propose to consider in this chapter is one to which we invite the careful attention of the reader.

Though parents, in general, may think that they have but little influence over the formation of the character of their unborn children, it is nevertheless true that they possess this influence to a great degree. In fact, character and temper are, to a certain extent, as surely transmitted from the parent to the child, as form, features, and expression. Why should they not possess as much power over the one as the other? Assuredly no good reason can be given, because none exists. We do not, however, intend to enter into a physical or metaphysical discussion of this subject, for the design of this chapter does not require it.

Many, and not the least, of the evils resulting from an indulgence of temper in pregnant women, they bring upon themselves. These are, "convulsions, nervous inquietude, *uterine*

hemorrhage, and perhaps abortion." Even if abortion should not take place, the child may receive such injury as will entail upon it a feeble constitution for life. It has long been a matter of observation by medical men, that women of passionate and irritable dispositions are more liable to abortion than those of an opposite temper. This fact alone should be sufficient to guard the mother against indulging in outbreaks of passion, the result of which, as we have seen, may be of such serious character. Nothing contributes more to the safety and future good health of the child, than cheerfulness on the part of the mother during her period of gestation. This fact was well known to the ancient Greeks. Hence they were in the habit of providing for the chambers of their wives the most beautiful specimens of art, as paintings of various kinds, from the best artists, representing the most illustrious personages in their mythology or history, as "Apollo, Bacchus, Castor, Pollux, Antinous, Narcissus, &c., that they might dwell upon their fine proportions with that complacency of spirit which a beautiful object is sure to produce." We do not believe that these things had any influence on the formative process; but if any good was effected by them, it was done by producing tranquillity of mind and cheerfulness of disposition. The truth of this is verified by every close observer of human nature. We will call the reader's attention to a few facts in support of it.

The father and mother who have filled up the measure of their days principally in those pursuits of life of which hardness of heart and recklessness of principle are the necessary results, bear, in the lineaments of their face, and in lines not to be misunderstood, a full index of their true character and disposition. Again: The face of the bacchanalian discovers at once, and with unerring accuracy, the pursuits and habits in which he has engaged, and by which he has been degraded below the level of the brute. Let this character pass through one or two generations, and we have its results in the physical and intellectual development of the offspring. Such, indeed, is the universal law of nature; and it has become a matter of general observation, that a man wears in his face the index of his family.

This is also true with respect to sects, tribes, and nations. The Jew can be pointed out by his features and manners, wherever he is seen. So can the Greek, the Turk, the Hindoo, the Hottentot, and the American savage. The doctrine of *Lavater*,

then, has more truth in it, than at first view it would seem to possess; viz., that a man's disposition, character, and feelings are written in his face. And phrenology has shown that the true seat of a man's character is to be sought for in the developments of his brain. Let us carry out this idea. And to do this, we turn our attention to the mother whose mind has been well cultivated, in a moral and religious sense. There is an ease of manners, and a modesty of deportment, that give grace to all her expressions and actions. The very lineaments of her face speak a heavenly peace within. There is none of that distrust, despair, or ferocity, that is seen in the fretful, desponding, avaricious, or bloodthirsty; but all is cheerful, lovely, and amiable. The character of the mother is reflected in her offspring; and we observe, even in the infant, an openness and fairness of countenance that attract the attention of all who are fond of the beautiful, noble, and good. Again: If we turn to the mother who has long been accustomed to eating opium, we shall see the heavy, somnolized, and vacant countenance, devoid of thought or expression; and in her offspring, to a greater or less extent, the same vacuity of face will be observed. Nay, this resemblance may be carried still further; for we have even seen the corners of its mouth habitually hanging down, and the saliva driveling from them. We have seen this in a distressing degree; and at the same time, all the features, taken together, indicated a state of despair—even before the child could speak the simplest words. Seeing, then, that these results may be entailed upon the child, mothers ought to be careful to avoid the practice which leads to them, and take such exercise of body and recreation of mind as will produce in them pleasantness of feelings, and cheerfulness of disposition; for, assuredly, it is a duty which they owe, not only to themselves but to their offspring.

#### OF SICKNESS AT THE STOMACH AND VOMITING IN PREGNANCY.

It will be remembered that vomiting, or what is called *morning sickness*, is one of the rational signs of pregnancy.

Perhaps there are but few women who do not feel more or less disturbance of the stomach in the early stages of pregnancy; especially when they first rise in the morning. Dr. Denman is of the opinion that it is the change of position which brings on the sickness, and that it is not the necessary result of pregnancy. But, as he pursues this subject, he tells us that this peculiar sick-

ness of the stomach "sometimes continues to, or returns towards, the conclusion of pregnancy." He says, if it should only recur in the early part of the day, "so far from being detrimental, it is generally found to be serviceable;" and he argues this from the fact, that the "matter evacuated sometimes shows a very much disturbed, or a morbid secretion of such a kind as to be offensive to the stomach itself."

It is thought, by many writers on midwifery, that vomiting in pregnancy is no detriment to woman or child; and some are of opinion that it gives energy both to the uterus and child. We must confess that we have never been able to fully comprehend this notion. Our conviction is, that no morbid action of the system, either local or general, sympathetic or primary, is necessary to the well-being of the patient. We are, however, ready to acknowledge, that an effort of the system, — no matter whether of the stomach or any other organ, — to relieve itself of offending matter, or an irritative action, may take place, and prove injurious or beneficial to the general health of the system; no doubt but this is often the case in the morning sickness of pregnant women. In the first place, the sympathy of the stomach with the uterus is such, that a change of action takes place in the stomach commensurate with that in the uterus. Though the exciting cause of this action may be healthy, yet its effect may be morbid. Hence, we often see an unhealthy, vitiated, or acid fluid, thrown up in the morning. Sometimes the liver is excited into action, and bile is discharged in greater or less quantities. The heart and liver may form the third link in the chain of deranged action, and fever or headache may be the result. So far as vomiting in the morning tends to relieve the stomach of crude or unhealthy matter, humors, or secretions; and so far as the arterial action and febrile symptoms are lessened, and headache abated, so far vomiting may be considered beneficial. But as soon as it proceeds further than this, remedies are called for, in order to meliorate or remove it.

Again—if the sickness of the stomach should continue all day, or nearly so, the patient will become very much weakened by it; and in either case, we should use the proper remedies to remove it. In the first place, if the sickness comes on immediately after rising in the morning, and nothing but a white, glairy fluid is thrown up, the best way to relieve it is, to take a cup of coffee or tea, with some dry toast, before rising from the bed. But should the effort to vomit bring up bile or acid, or an unpleasant tasted,



half-digested substance, the patient should drink a cup of warm camomile tea, or take a tea spoonful of table salt in water, and puke freely, so as to clear the stomach of all offensive matter. But should this not remove the bile, she may take the following medicine :

*Recipe :* Ipecac., fifteen grains.  
Tartar Emetic, one grain.

Mix. Dissolve in nine table spoonfuls of warm water. Take three at first, and then one every fifteen minutes. When this has produced vomiting, let a glass of warm water be given every time the patient pukes, till she has three or four motions up. A little table salt in water will turn it down on the bowels.

If the patient is fearful of cramp being produced by the emetic, she may, instead of taking warm water, drink a tea made of wheat bran to work off the emetic. If she takes this she will not be cramped, but will puke very easily. Sometimes the fluid thrown up in the morning is very acid, and so affects the teeth as to make them sore. In this case, take

*Recipe :* Sup. Carbonate Soda, one ounce.

Take of this half a tea spoonful, dissolved in two table spoonfuls of cold water. This will neutralize the acid in a great measure; and should it be thrown up, the dose should be repeated immediately. In half an hour afterwards, take the following :

*Recipe :* Henries' Calcined Magnesia, thirty grains.

Mix in a little water, and take it at one draught. If, after repeating these medicines a few mornings, the sickness should continue, take the following pill at bedtime :

*Recipe :* Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Best Ground Ginger, ten grains.

Form twenty-four pills. Take from three to six of these pills at bedtime; or just as many as will operate once or twice the next morning. This dose should be repeated for a week. Should the sickness of stomach continue, and the patient have any pain in the head, with or without soreness in the stomach, she should be bled moderately from the arm. Sometimes the following drops will give relief :

*Recipe :* Essence of Cinnamon, half ounce.  
Compound Spts. of Lavender, half ounce.



Mix, and take forty drops in a little water, in the morning. They may be repeated several times through the day. The practice of giving laudanum or paregoric at bedtime, or at any other time, is a bad one, and should be avoided, as it never fails to weaken the stomach and aggravate the disease.

When all other medicines have failed, if the stomach be first cleansed, we have known the following to give prompt and lasting relief:

*Recipe:* Tinct. of Extract of Nux-vomica, one drachm.

From five to ten drops of this tincture may be given, two or three times a day, in water.

But after all the remedies that can be prescribed are used, if the patient is not particular in her diet, she will not be relieved. She should take no heavy or indigestible food. A tea spoonful of Huxham's tincture, in a little sweetened water, may be taken just before meals.

#### OF BLEEDING DURING PREGNANCY.

The susceptibilities of the female system during pregnancy are peculiar. All experienced physicians know that a pregnant woman not only bears, but requires, more active depletion with the lancet, in the treatment of inflammatory diseases, than those who are not in that situation. Tonics are also less admissible in the treatment of the diseases to which pregnant women are liable, than in those of other females. In an especial manner, she cannot bear stimulants, either in health or sickness, without more or less injury; while an unimpregnated woman may take them with impunity. This condition of the system continues till the fifth or sixth month, when a change generally takes place, and stimulants and tonics may be beneficially used. This is probably owing to the fact, that the uterus makes a greater demand upon the system for blood; and also that it may have become more accustomed to the stimulus of pregnancy. After the fifth month, the fundus of the womb loses, in a great measure, its resistance, and becomes less irritable, in consequence of its increased vascularity and the increased power of the child. Hence, all the early symptoms of pregnancy cease after the fifth month.

There are often many objections urged against bleeding a pregnant woman; and these objections frequently prevent the young and inexperienced physician from doing his duty in this particular. Sometimes the omission of this duty proves fatal to the patient. The reasons offered by the objectors to the use of

the lancet, are, that it weakens the child and makes the mother liable to miscarry. But nothing can be more erroneous than this. When about the fourth month, or at any time after that period of pregnancy, a pain in the head, tightness of the joints, or stiffness of the limbs, are experienced, the loss of a pint or so of blood may be beneficial. A gentle purge—say the following pills—should be used.

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.

Form twenty pills. Take four at bedtime, and repeat every night till these symptoms are removed. At the same time, the diet should be light and cooling.

#### OF PURGING DURING PREGNANCY.

The choice of purgative medicines for pregnant women is of great importance. Choice should be made of those that do not gripe, operate very powerfully, or produce a difficulty in making water. When drastic medicines are necessary, they should be directed by a physician while the patient is under his immediate care. For should those medicines produce straining, tenesmus, or stranguary, they may bring on abortion or miscarriage; especially with those who have suffered any of these accidents before. In the selection of medicines, therefore, these things should always be kept in view. Some medicines,—such as jalap, aloes, scammony, gamboge, and colocynth,—when given alone, always gripe. But when combined with others, they constitute the safest and most gentle purgatives. Should a gentle purgative be needed, one of the following compounds may be used :

*Recipe* : Scammony,  
Pulv. Aloes,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Pulverized Ginger, ground, ten grains.

Form twenty pills. Take three or four at bedtime The doses may be repeated as often as necessary.

*Recipe* : Pulv. Aloes,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Oil Sassafras, four drops.

Form twelve pills. To be taken as above; or,

*Recipe* : Ext. of White Walnut Bark, forty grains  
Grated Nutmeg, ten grains.

Form ten pills. Take them as above directed. As a general rule, that should not be varied from, no purgative that will produce griping should be taken by a pregnant woman; and almost any gentle medicine may be taken by her with safety. Magnesia or castor-oil may generally be taken with safety, if properly prepared.

*Recipe* : Calcined Magnesia, one drachm.

This should be mixed in vinegar and water, or in lemon juice and water, and taken for a dose.

*Recipe* : Castor-oil, one ounce.

This should be warmed till it is thin, and then mixed in warm coffee, or, what is better, vinegar and water. The acid separates the particles of oil, and makes it operate easier and better. Perhaps no case of abortion has ever been produced by free purging, if no griping attends the operation of the medicine. It is the specific effect produced by strong cathartics on the lower bowels, that works injuriously in pregnancy.

To sum up all that may be necessary to be said on this subject,—let the bowels be kept open with some mild purgative. And one of the most simple that can be used, is a glass of wheat-bran tea, sweetened with molasses, taken morning and evening. This generally keeps the bowels in a fine condition.

#### OF HEMORRHOIDS, OR PILES.

Pregnant women are more liable to become costive than those who are not so; and costiveness is generally the cause of piles. When the piles have been formed, and suffered to remain exposed to the air, they are liable to inflame and become very sore. The torpid condition of the bowels, the constant growth of the child, and the consequent pressure, preventing the free return of blood from the hemorrhoidal vessels, and the sedentary life of pregnant women, are generally the cause of this form of disease. Sitting on a sofa-cushioned chair is another fruitful cause of piles; or they may be brought on by long standing; so that too continued use of either position is not good.

When piles are coming on, a sensation of pain or aching is felt in the lower bowels. This is followed by a throbbing sensation, which causes the patient to press with the hand on the part affected. Swelling, in a greater or less degree, makes its appearance, accompanied by more or less pain. The tumor may not be larger than a filbert or bean; yet it is so painful that the patient

cannot rest easy in any position. When this is the case, the sphincter muscles act so powerfully that the blood contained in the tumor cannot return into the general circulation.

For the cure of this form of piles, bathe the parts with a strong tea made of hop-blossoms, and bleed from the arm. Take the following pill :

*Recipe :* Pulv. Rhubarb, forty grains.  
Castile Soap, twenty grains.  
Scammony twenty grains.

Form twenty pills. Take four or five every night at bedtime for four or five nights, and use the following ointment :

*Recipe :* Extract Belladonna, one drachm.  
Hog's Lard, half an ounce.

Mix these well into an ointment. Rub the piles frequently with it three times a day, or use the following ointment :

*Recipe :* Jamestown Leaves, four ounces.  
Hog's Lard, one ounce.  
Water, two ounces.

Cut the leaves fine, add the lard to them, and simmer them down slowly to a salve. Anoint the piles with this, three times a day. Live on a light, cooling diet. Or take,

*Recipe :* Poppy-Heads, two ounces.  
Hog's Lard, one ounce.  
Water one ounce.

Cut the poppy-heads fine, and add the lard and water, as above directed, and simmer the mixture slowly to an ointment. Strain the oil out, and when cold, use it as above.

There is another form of piles, which is not so painful, although the tumor is larger. In this case, the sphincter muscle is relaxed.

**TREATMENT.** Use the cold bath to the parts, with leeches on and around them, to extract the blood. Then use an ointment of,

*Recipe :* Pulv. Nut-galls, one drachm.  
Hog's Lard, one ounce.

Mix well, and anoint the parts freely. Or a wash of red-oak bark ooze, made strong, may be used. If the patient is fleshy, she should be bled. The blue ointment is also a good remedy in these cases, and a plaster of fuller's earth will often give relief. Be sure to put them up as soon as possible. The best position all this time will be upon the back, with the knees drawn up. Keep the bowels open with the following pill :

*Recipe :* Blue Mass, one drachm.  
Pulv. Rhubarb, one drachm.  
Castile Soap, half drachm.

Form ten pills. Take five at bedtime, and repeat them every night, for several nights. But if the patient is feverish, and the tongue coated, with or without pain in the head, take.

*Recipe* : Calomel, ten grains.  
Rhubarb, fifteen grains.

Form six pills; to be taken at bedtime, and worked off the next morning with gruel. Then take the first pills till the tongue is clean. If the piles still continue troublesome, take,

*Recipe* : Cream Tartar, half ounce.  
Milk of Sulphur, or  
Flour of Sulphur, one ounce.

Mix them together, and take a tea spoonful three or four times a day, or just as much as will keep the bowels freely open. If any of the above medicines cannot be procured, take,

*Recipe* : Epsom Salts, one ounce.

Dissolve them at night in a glass of warm water, and let them stand till morning. Then take a table spoonful every hour till they operate; taking care, however, to leave the sediment in the glass, which sediment is the sulphate of iron, and should not be taken.

If all these remedies fail to relieve the patient, and cure the disease, if the piles continue after she is delivered, or even if they should occur in a woman who is not pregnant, and refuse to yield to the above remedies, they should then be cut off. This operation is not very painful, and is a safe and sure cure. We have removed a great many, and always with success.

#### OF PALPITATION OF THE HEART.

We do not design to treat of this disease as it occurs in organic affections of the heart; but only in its sympathetic form.

Pregnant women are more especially liable to this disease before the period of quickening, than at any other time. It follows some nervous women through the entire period of gestation. It is often the most prominent symptom in a paroxysm of hysteria. Sometimes it is the consequence of too much blood; and is then accompanied with pain in the head, flushing in the face, a full and irregular pulse, which beats with a fluttering sensation. When these symptoms exist, the patient should be bled, and take the following medicine:

*Recipe* : Scammony, twenty grains.  
Pulv. Rhubarb thirty grains.  
Aloes Socotrine, ten grains.  
Gum Fœtida, ten grains.



Form twelve pills. Take four at bedtime and two in the morning; and repeat the dose the following night. The diet should be light, and all stimulants should be avoided. In the hysterical form of the disease, after each paroxysm, there is a copious flow of pale-colored urine. For this form of the disease, give the following pill :

*Recipe :* Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Russian Castor, ten grains.

Form ten pills. Give five at bedtime, and repeat till the symptoms are removed. But should the paroxysms recur frequently through the day, give the following mixture :

*Recipe :* Tincture Castor, two drachms.  
Tincture Fœtida two drachms.  
Comp. Spts. Lavender, two drachms.

Mix them together, and give a tea spoonful in water. Repeat every half hour, or oftener, till the symptoms are removed ; or

*Recipe :* Tincture Castor, one drachm.  
Vol. Tinc. Valerian, half drachm.  
Æther Vitriol, two drachms.  
Elixir Paregoric, two drachms.

Mix. Give as above directed till relief is afforded.

None of these medicines should be used to the exclusion of the pills ; but they may be taken at the same time. Sometimes a cup of orris tea will give relief. When nothing else can be had, give fifteen or twenty drops of laudanum in water, and repeat once in half an hour. A large draught of very cold water has been known to give immediate relief.

In every case, keep the bowels open, and live on a light diet. Take all the exercise in the open air that strength will admit of, and cherish a cheerful and lively disposition.

#### ON THE USE OF EMETICS AND BLISTERS IN PREGNANCY.

In the advanced stage of pregnancy, the abdominal muscles are so much distended by the contents of the uterine, that they cannot, by their contraction, aid the stomach in ejecting its contents, but exert their contractile force upon the uterus. For this reason, strong emetics should not be given in an advanced stage of pregnancy. And another reason why they should not be given is, that the stomach, once excited into violent action, at this time, is more difficult to be allayed, than under any other circumstance or condition. But very mild emetics may be given when the urgency of the symptoms demands them, and no other

medicine will give the desired relief. When all the circumstances of the patient are taken into consideration, we think emetics should be the last resort for the cure of diseases during pregnancy.

Blisters are of doubtful utility when applied to pregnant women. They are more likely to produce abortion than to cure the disease for which they are intended as a remedy. If they are applied at all, the face of the plaster should be lightly sprinkled over with gum camphor finely pulverized, and a piece of fine gauze laid between the surface of the skin and the plaster. In no case, however, should a blister be applied on the abdomen, or the back; as strangury is one of the dangerous symptoms produced by a blister when applied to a pregnant woman. The patient should drink freely of slippery-elm tea all the time the blister is drawing, to prevent strangury or a difficulty in making water.

#### OF UTERINE HEMORRHAGE DURING PREGNANCY.

That pregnant women are subject to hemorrhage, (or flooding,) is a fact so well known, as to require no cases to establish it.

This flooding is sometimes so profuse as to destroy both mother and child; and, on this account, women are justly alarmed whenever it occurs. In the first link of pregnancy, the *ovum* or *fœtus* is enveloped in a membranous substance called the *placenta* or *after birth*. This substance is attached on one side to the womb, and to the child on the other, by the navel string. When the *fœtus*, or child in embryo, first passes out of the *fallopian tube* into the uterus at one side of its fundus, one surface of the placenta attaches itself to the womb. This is called the maternal portion of the placenta. The other portion of it is attached to the child by the umbilical cord, or navel string; and this is called the *fœtal* portion of the placenta.

It must be recollected that the placenta is double, yet enveloped in one membrane. The maternal portion of the placenta receives innumerable blood-vessels from the surface of the womb to which it is attached, and sends back to that organ a like number of those vessels. The *fœtal* portion of the placenta receives its blood-vessels from the maternal portion of the placenta. Having received the blood from the mother, through this medium, it conveys it to the child through the umbilical cord, or navel-

string. The blood so received is conveyed and reconveyed, from the mother to the child, and from the child to the mother.

Having given this short explanation, we have only to say, that anything that will separate the placenta from the womb, will cause uterine hemorrhage, or flooding. Every discharge from the womb of blood that will clot, is hemorrhage; and a discharge of blood that will not clot, is not hemorrhage. Consequently, the latter is attended with no danger; but the former, when profuse, is attended with great danger. No considerable hemorrhage can take place, without a detachment of the placenta from the uterus; and, moreover, it will always be in proportion to the extent of this detachment.

There are various causes that may produce a separation of the placenta from the womb. *First.* The navel-string may be too short, and the motions of the child may tear the placenta loose from the womb. *Secondly.* Any mechanical violence, such as a sudden fall on the bottom, or blow on the abdomen, or small of the back; lifting heavy bodies; reaching too high; great exertion in running; leaping too far; running hastily up and down stairs; violent passions or emotions of the mind, as joy, grief, anger, or disappointment; plethora, or too full a state of the blood-vessels, may produce hemorrhage.

It is not necessary to enter into detail, to show how these causes produce a separation of the placenta from the womb, and so cause flooding, and consequently abortion or premature labor, if not arrested in time. There is, however, one more cause of uterine hemorrhage which claims our special attention. This is found in those cases in which the placenta is situated over the mouth of the womb. This is an unnatural position for that body; but, nevertheless, it is sometimes found here. Be the cause of hemorrhage what it may, when it takes place—if the bleeding is profuse—it lessens the bulk of the placenta; and the womb, to close the space, always contracts. This contraction, if not arrested, will sooner or later expel the contents of the womb. But should that organ not have sufficient strength to accomplish this expulsion, the flooding will still continue, and the danger will be increased. When the placenta is situated near the edge of the mouth of the womb, or over it, the contraction of the womb, and consequent dilatation of its mouth, will always increase the hemorrhage. This will be the case whether the labor is natural or preternatural.

It is at all times difficult to arrest muscular contraction, when

it is once established and marked by regular pains. But that such efforts are never attended with success, we are not willing to admit. On the contrary, we know it has been arrested; and although we may fail in many instances, yet the attempt should be made in all cases where there is any probability of success; for if the life of one child in ten be saved by it, we have reason to be gratified with the result.

Where the breasts have become tumid and tender, and have suddenly decreased in size, succeeded by uterine hemorrhage, it would be almost useless to administer remedies with a hope of saving the life of the child. For these are symptoms that strongly indicate its death, especially when no motion can be felt, and the mother shows a dark, circumscribed circle under her eyes, and experiences a feeling of faintness or languor. These signs were known to Hippocrates, and have stood the test of experience ever since.

So long, then, as this symptom is absent, we should try to save the child. The patient may not exhibit these signs, and yet the ovum may be cast off; in which case it is to be ascribed to the contraction of the uterus. These signs may, however, be absent, and yet the child may be born dead; but it will appear evident that it died a very short time before birth. These cases occur the most frequently with women that have miscarried before. The mouth of the womb may be dilated as large as a crown-piece, and still the child may be carried for weeks; but this is not common; and we are justifiable in saying the mother will probably lose her child when the os uteri is thus dilated. *Dr. Burns* says, "Cases have occurred where women, carrying twins, have lost one, and carried the other to its full time." And our own periodicals contain the reports of many such cases.

Where the placenta is situated over the mouth of the womb, hemorrhage is sure to take place between the seventh and ninth month. The distension of the uterus by the growth of the child will naturally produce this effect, and it cannot be avoided. We have, therefore, no remedy but the delivery of the child; and this must be done to prevent the mother falling a sacrifice to the loss of blood. When we are called to a pregnant woman laboring under uterine hemorrhage, if she has not been hurt, has no pain, and the bleeding is not profuse, we may calculate with more certainty on relieving her, than under a different state of facts.

The placenta may be detached at different points. If the



detachment be at, or near, the fundus of the womb, the prospect of success in arresting the hemorrhage will be very small; for every contraction of the fundus will increase the separation of the placenta, and the passage of the blood downwards will aid in that separation. By this means contraction will be increased, and, in all probability, the child will be lost. But should the detachment be at the lower part of the placenta, and near the mouth or neck of the womb, the hemorrhage may be much more profuse, and contraction exist; yet the child may be saved. The first appearance of flooding should be attended to immediately, as a few drops may precede a serious hemorrhage; and the sooner it is undertaken, the more certain are we of success. On its first appearance, the patient should be placed on a mattress or straw bed, or even on the floor, in preference to a feather bed. Cool drinks should be given; even ice-water in small quantities, or cold barley or tansy tea, or vinegar and water. The diet should be cold and thin, such as gruel, tea, sago, &c. No wine or spirits should be used under any pretext whatever; unless, indeed, faintness should come on, in which case, stimulants may be beneficial. While there is any probability of saving the child, the patient should not move hand or foot, except when absolutely necessary. Talk as little as possible. These things should be strictly observed, as the forfeiture of neglect may be the loss of the child, and perhaps that of the mother too. The friends of the patient, often through the best of motives, do her much harm. They wish to be doing something to render her comfortable; and by fixing the pillows or adjusting her in bed, giving first one thing and then another, they defeat the good effects of the best directed remedies that could be prescribed. It is too often the case that marvellous stories are told on such occasions; and every case of the kind, which they ever heard or knew of, that terminated fatally either to the child or mother, must here be related—little thinking that by such conversation hundreds have been sent to an untimely grave. Conversations of this kind should never be allowed in the sick room.

**TREATMENT.**—The first thing to be done after arriving at the bedside of the patient, is to ascertain, if possible, the cause of the flooding. The condition of the os uteri should be next inquired into. If you find it much relaxed, the membranes protruding, or the child pressing down very low, with a relaxed state of the neck of the womb, the loss of the child is altogether probable.



But if the os uteri be closed and the parts tolerably firm, the pulse full, whether the patient be fleshy or not, bleeding from the arm should be tried. Apply cloths dipped in cold water, or even ice water, to the small of the back, and vulva, extending them over the pubis. Enjoin absolute rest.

With these symptoms, there is some prospect of success. Should the means here recommended not prove sufficient to relieve the patient, give the following medicines :

*Recipe :* Pulv. Opium, four grains.  
Sugar Lead, twenty grains.

Mix. Divide in four powders, and give one every half hour, in sugar and cold water, till the pains are relieved. If the hemorrhage should continue, fill the vagina with soft linen cloths, wet in cold water; or a piece of fine sponge, well cleansed by being washed in vinegar, and dipped in cold water, may be carefully introduced into the vagina. Let it remain till the flooding is arrested.

Continue the cold applications externally. Keep the patient still, and the bowels open by the following medicine :

*Recipe :* Rochelle Salts, one ounce.

Dissolved in cold water, and taken at two or three draughts half an hour apart. If this cannot be had, use the following :

*Recipe :* Epsom Salts, one ounce.

Dissolve these salts in cold water, and let them settle an hour or two. Then use them as above directed; or,

*Recipe :* Castor-oil, one ounce.

Take this in sweetened vinegar and water, cold; or,

*Recipe :* Scammony,  
Aloes Pulv.  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.

Form twenty pills. Take four, and repeat two every two hours till they operate. Use as little exertion as possible under the operation of the medicine; and if a bed-pan can be had, it should be used, in order that the patient need not be compelled to rise.

If the sugar of lead and opium cannot be had, take the following medicine :

*Recipe :* Pulv. Alum, ten grains  
Laudanum, forty drops.

Mix them in sugar and water, and take the whole for a dose. Half the quantity may be repeated every half hour, till the pain and flooding are arrested,—using the external remedies at the same time.

The patient should not be examined often, lest by so doing the womb should be excited to contract, and increase the flooding. But, above all, let especial care be taken that the membranes are not broken; for if this should occur, the fœtus will escape and leave them behind; thereby causing more trouble to remove them than if all were suffered to come together. An unceasing discharge, moreover, will be the consequence. But should the efforts of the uterus rupture the membranes, and cause the child to escape,—which is unfortunately too often the case,—some difficulty may be found in removing the after birth. Should it have partially escaped, and lodged in the os uteri, be careful not to pull at it, or to irritate the uterus, lest an increased hemorrhage be the result. Rather let it remain, and it will check the bleeding; after which, the uterus will throw it off by its own efforts, or it can be removed by the midwife with great ease.

Should there be any difficulty in removing, give the ergot, or spurred rye. When the spurred rye is given, it should be boiled to a tea in the proportion of a tea spoonful, or one drachm to a pint of water; and taken at three draughts, fifteen minutes apart. This will excite contraction of the uterus, and throw off the after-birth. As soon as this is removed, the patient is safe. We have never known a fatal hemorrhage follow an abortion when the after-birth was removed.

During the whole progress of this case, the feet of the patient should be kept warm; for just in proportion to the coldness of the feet and legs, will the uterine hemorrhage be increased. Let the feet, therefore, be kept warm by a *dry* heat. A moist one will not answer. Absolute rest and quietude of mind are indispensable to a recovery.

#### OF FEVER DURING PREGNANCY.

That there is a febrile disposition, or an increase of heat, during the state of pregnancy, no one can deny. But that this is a diseased condition of the circulation, or state of the system, is thought to be doubtful; for when it is properly conducted, it tends to the growth and perfection of the child. The blood of pregnant women, independent of disease, always presents a *sizy* appearance. But it is of its own peculiar kind; and is evidently

very different from that which appears in an inflammatory condition. It is, no doubt, in consequence of a new and specific action, produced in the system for the purpose of supplying the fœtus with that portion of blood which is necessary to its growth and perfection. In justification of this opinion, if an inflammatory disease should occur during pregnancy, the blood loses the distinctive marks which were given to it by pregnancy, and assumes that inflammatory appearance which belongs to the peculiar form of disease which then pervades the system.

This disposition to fever during pregnancy is greatly increased by the use of improper diet. It is a popular opinion among pregnant women, that they should eat more than other women; and strong diet is chosen for them, which, they say, is to support the infant. But this is an erroneous idea; for the use of animal food always increases the disposition to animal heat, headache, and costiveness.

In accordance with the popular error just mentioned, cordials, beer, porter, ale, and wine, are recommended by ignorant midwives. But all this is injurious, and should be avoided. Let the patient herself speak on this subject, and she will tell you that she feels better when she abstains from these things; and that as often as she partakes of them, a feverish and dull feeling, accompanied with a headache, is apt to follow. Common sense, indeed, should teach us that what is improper for the mother, is also improper for the child. If a pregnant woman is permitted to choose for herself, she will invariably choose light vegetable, or acidulated food, acidulated fruits, cooling drinks; after the use of which, she is lively, cool, and cheerful.

The bowels are kept in better order by the use of such diet, and a greater amount of exercise can be taken without fatigue. Nature is the best guide to health, and she should be closely observed.

Use a light diet; keep the bowels gently open with mild purgatives; and this febrile disposition will do no harm.

#### OF COSTIVENESS DURING PREGNANCY.

Costiveness is a common complaint of pregnant women. It originates partly from the pressure of the child upon the rectum, or lower bowels, and partly from neglect and improper conduct.

It is too often the case that pregnant women indulge in the superstitious notion of what is called *longing*. This leads them to the use of indigestible substances as a diet, or an absorbent,

such as chalk, charcoal, cheese, clay, burnt coffee or coffee grounds, pencils, and other substances of a similar nature. By taking these things into the stomach, the bowels become impacted and loaded, so that it is sometimes almost impossible to procure an operation through them. There is an acid on the stomach of females during pregnancy, that causes them to take these absorbent substances. But that acidity should be removed by the use of the proper remedies. Another cause of costiveness in pregnant women is the use of too heavy and rich diet.

**TREATMENT.** — All heavy, indigestible food should be avoided. The diet should be light, cooling, and acidulated rather than sweet. If there is much acid on the stomach, a gentle dose of ipecac. will remove it.

*Recipe:* Pulv. Ipecac., twenty grains.

Dissolve this in a gill of warm water, and take it at three draughts, twenty minutes apart, until vomiting is produced. When this is effected, the patient need not take any more. A glass of warm water should be given every time she attempts to vomit, till she has had three or four motions up. She may then take a little gruel, to turn it down. If it should not act on the bowels, take two or three of these pills:

*Recipe:* Scammony,  
Pulv. Rhubarb,  
Aloes Socotrine,  
Castile Soap, — of each twenty grains.

Form twenty pills. Take two or three every night, so as to keep the bowels open. Take such exercise as strength will allow; and let it be an invariable rule to go at a certain time every day and elicit an evacuation from the bowels.

The patient should never indulge in the use of any of those crude and pernicious substances which too many are in the habit of taking. The bowels sometimes become so impacted with hardened fæces, either from neglect or from the use of such substances, that medicine will fail to open them. In this case, they must be relieved by an injection, which should be made of molasses and water, or thin gruel, lard, and salt, or a solution of Epsom salts, in warm water, or mild soap suds. Either of these, repeated till the hardened fæces which lie in the rectum are softened and brought away, will answer the purpose.

## OF THE SLEEPLESSNESS OF PREGNANT WOMEN.

It is not an uncommon thing for pregnant women, towards the latter end of gestation, to feel feverish and restless during the night. These feelings are frequently attended with slight pains, not unlike those in the commencement of labor, together with a disposition, without the ability, to sleep. In this state, the patient often rises and exposes herself to the cool air, but cannot sleep till just before daylight, when she falls into a sweet sleep, and awakes in the morning apparently as much refreshed as if she had slept all night.

There are several causes for these restless feelings, some of which we can alleviate, others we can guard against, and some we cannot do anything for. These causes are, the too free use of strong food, especially at supper; keeping the room too warm; the constant demand of the child on the system of the mother; costiveness, and too full a state of the blood-vessels.

**TREATMENT.**—The room should be kept cool and well ventilated. The diet should be vegetable, and of a light, cooling character. The supper, if any at all be taken, should be very light. If the patient is full of blood, she should be bled. Let the bowels be kept open with the following pill:

*Recipe:* Scammony,  
Pulv. Rhubarb,  
Aloes Socotrine,  
Castile Soap,—of each twenty grains.

Form twenty pills. Take three, two, or one, every night, at bedtime; or just as many as will operate next morning. Rest has been often obtained by placing a pitcher of water by the bedside, wetting a towel, and holding one end in the hand, while the other lies in the water. This cools the whole system, by passing the heat off from the hands through the wet towel. When the pains are so great as to prevent sleep, they may be relieved by rubbing the abdomen with the following liniment:

*Recipe:* Laudanum, half ounce.  
Spirits Camphor, half ounce.  
Sweet Oil, half ounce.

Mix them together, and use it at bedtime.

It is the practice of some to give laudanum, or some form of opium, to procure sleep. But we are opposed to this practice, because it produces costiveness. It often fails, moreover, to induce sleep, and leaves the patient with a sick stomach in the



morning; nor are we free from serious doubts that its effects are injurious to the child, if long continued.

Women who have fine large children, are apt to have these restless nights towards the latter end of gestation; and sometimes they are apprehensive for the child, fearing that it may be dead, or in a bad condition, when they are subject to these restless feelings. But such fears are without solid foundation. The existence of those feelings is evidence that the child is healthy and vigorous; for they vanish immediately, if the child be dead.

#### OF DIFFICULTY IN MAKING WATER, OR STRANGURY.

It is not an unusual occurrence for women to experience a difficulty in making water, while in a state of pregnancy. This occurs in the early stage of pregnancy, and is considered by some as one of its signs. When it takes place at this period, it is occasioned by the uterus pressing on the neck of the bladder, which causes a frequent desire to urinate, though there is but little water voided at a time. Sometimes it is produced by remaining too long without answering that call of nature. This, in the third month of pregnancy is dangerous; for it may produce a retroversion of the uterus, by throwing the fundus back, and the cervix forward. In a state of pregnancy, females should never hold their water when they feel a disposition to void it.

In the latter months of pregnancy, this difficulty is changed for an inability to retain the water. This is produced by the weight of the womb on the fundus or top of the bladder. If the woman should have a hard cough, slight jets of water will pass; and this is thought by all writers on midwifery to be a favorable symptom, as the child is presenting right.

**TREATMENT.**—In the first stage of pregnancy, this difficulty may be removed by keeping the bowels open with neutral salts, such as,

*Recipe:* Cream Tartar, half ounce.  
Rochelle Salts, half an ounce.

**Mix.** Take a tea spoonful, two or three times a day. If the patient is fleshy, a little blood may be taken from the arm with benefit. Slippery-elm or marsh-mallow tea will be the best drink, and a light diet should be strictly maintained. Water-melon or pumpkin-seed tea is good; or, if it be in the season for melons the juice of that fruit may be used freely, as it is cooling and diuretic. As soon as the child has grown a little more, this difficulty will be removed.

In the latter stages of pregnancy, if there should be much inability to retain the urine, and the abdomen is large, it should be supported by a bandage round the waist, with two straps, like suspenders, fastened to it, and passed over the shoulders and buttoned behind. Let these so act as to raise the child a little, and take the pressure off the bladder. All other things being right, an easy labor and a speedy recovery may be expected.

OF PAINS IN THE HIPS, THIGHS, LEGS, AND VARICOUS VEINS OF THE LOWER EXTREMITIES.

Pains in the hips, thighs, and legs, happen as often as any other complaint to which pregnant women are subject. These pains are produced by the pressure of the gravid uterus on the ischiatic nerves, and those which pass through the perforations in the anterior part of the sacrum. In certain positions of the body, they are always increased. When the patient is accustomed to sleep on one side, a change of position uniformly gives relief. Wandering pains in different parts, especially about the face, teeth, and ears, are common in pregnancy, and are considered by some writers as a sign of that condition.

All such pains are evidently produced by uterine irritation, and may be eased by ether, laudanum, camphor, castor, musk, oil of cajeput, or some other anti-spasmodic or stimulant. Yet they sometimes defy them all. In such a case, bleeding and gentle purgatives give relief. The hips, thighs, and legs may also be rubbed with laudanum and sweet oil. The bowels should be kept open with some gentle purgative, and the diet should be light. Moderate exercise will be found beneficial.

It is not an uncommon thing for the veins of the legs and thighs, and abdomen, to become varicous,—that is, very much enlarged, and crooked in their course, during the last stages of pregnancy. This condition of the veins is often attended with cramp, which is, no doubt, produced by the pressure of the uterus on the internal veins, thus preventing the blood from returning to the body as freely as it should do. The remedy is to bleed, purge lightly, and live on a light diet. The limbs should be bandaged if the veins are much enlarged, and a recumbent posture frequently taken. Delivery cures all.

## SWELLINGS OF THE FEET AND LEGS.

Swellings of the feet and legs are frequently to be met with in pregnant women. The swelling sometimes extends to the thighs and abdomen, and frequently affects the genital parts. We have seen cases where the legs have burst and the water run out freely.

This troublesome affection (for it cannot be called disease) is produced by the loaded uterus pressing upon the lymphatic vessels which pass through the pelvis; thereby preventing the due return of the fluid they contain to the upper part of the body. In all such cases, the patient will be found to be of a costive habit. The swelling is generally less in the morning than in the evening, owing to the recumbent position through the night. It is sometimes so great as to produce great pain, and almost entire helplessness.

**TREATMENT.** When the patient is fleshy and full of blood, she should be bled, live on a very light diet, and take the following medicine:

*Recipe:* Cream Tartar, one ounce.  
Pulv. Rhubarb, half ounce.  
Saltpetre, one drachm.

Mix them all together, and take a tea spoonful, three or four times a day, in parsley tea. The exercise of the patient may be such as she is able to bear without fatigue; and she should lie down frequently through the course of the day.

The genital parts, at times, swell so much as to produce difficulty in making water. When this swelling cannot be reduced by the above remedies, the labia should be lightly punctured on their inner edge, with the point of a lancet. This will do no harm in delivery; but, on the contrary, much good, by reducing the swelling and allowing the parts to yield to the pressure of the child's head, and thereby save the patient from the danger of a laceration of them.

## OF EXERCISE AND DIET DURING PREGNANCY.

There are many erroneous opinions in relation to the exercise and diet of pregnant women. A good lesson may be learned on this subject from the brute creation. *They* do not place themselves under any restraint, in the early part of pregnancy, in relation to exercise; but indulge in it as freely as at any other time. This, however, is not always the case with women.

They sometimes suffer from an enfeebled condition of the body at this time, to such an extent as to forbid their exercising freely and if they do, they are liable to a fainting sensation, which would, in some cases, if the exercise be continued, produce syncope. Exercise leading to such results, should, of course, be avoided. These cases appear to be exceptions to the general rule; for usually the patient may take her accustomed exercise at this time. It must, however, be kept in mind, that what would be ordinary exercise for one lady, would be more than another could bear; and, on the other hand, what would be sufficient for one, would leave another in a state of almost entire inactivity. The healthy, active countrywoman can exercise much more freely than the delicate and enfeebled inhabitant of a city.

Much depends on the location and general habits. The healthy and robust woman in the country, and the laboring, hardy female that lives in the city, often feel that if they could enjoy the indulgence of the weakly and fashionable lady, they would do much better; and the bitter cup of child-bearing would be greatly sweetened by it. But this is a great mistake. We find universally, that the active, stirring woman, of robust constitution, passes through this process better, and recovers more certainly, than those of a different character and habit. As, therefore, all observation and experience show that the advantage is on the part of the active and robust, we have no hesitation in believing that this is the best condition at last, and draw the following conclusion from the above observations. Let the pregnant woman neither diminish nor increase the amount of her accustomed exercise, provided her strength and other things enable her to perform it.

This will hold good till the period of confinement draws near; and when she comes within a few weeks of that period, she should gradually lessen the amount of exercise, move more slowly, take more rest, and observe as much quietude of mind and body as possible.

In relation to diet. This need not be changed for the first six months, provided the appetite craves it, and there are no forbidding circumstances. But when the latter months come on, — from the sixth to the ninth month, — she should begin to lessen the quantity, especially of animal food. Her diet should then be more plain, simple and cooling, till she enters the ninth month, at which time she should refrain from meats of all kinds, and high-

seasoned food of every description. Her diet should be of the lightest vegetables, with milk and bread, tea, or coffee, with plain biscuit and butter, and soups that are not rich. She should take no more exercise than she is perfectly able to bear. Perhaps half or more of her time should be spent in lying down or moderate walking. No stimulants of any kind should be taken.

There is a false notion in the world, on this subject, that has laid the foundation of much injury. It is this. Women are persuaded that in the latter months of pregnancy, they must eat heartily of rich food, in order to support the infant. We have often heard such language addressed to them: You must take another cup, or another piece of rich food, for the little one,—accompanied with a very wise look. And thus the young and inexperienced are misled by the aged matron or midwife, to whom they look for advice. A loaded stomach, and consequent indisposition, perhaps sickness, is the result. But the worst has not yet come. When labor comes on, the patient is doomed to suffer fourfold what she would under other circumstances; and perhaps have an injury inflicted upon her from which she may never recover, since convulsions, a laceration of the perineum, or the delivery of a dead-born child may be its results. But should she escape these fearful consequences, it is impossible for her child to be as active, healthy and strong, as if she had lived lightly before her confinement. Besides, after such full living, she is always more liable to child-bed fever. In short, common sense, experience and observation alike forbid indulgence in such pernicious practices, more especially in the last two or three months of pregnancy.

#### OF HEADACHE.

This is not an uncommon attendant on pregnancy; and is sometimes so severe as to become a dangerous symptom.

For the most part, it is caused either by too much blood flowing to the head, or is a sympathetic pain, resulting from a deranged condition of the stomach and bowels. It is a matter of common observation, that pregnant women have a flushing in the face, and are rather of a feverish disposition. This, however, does not generally take place till after the fifth or sixth month, and is produced by the weight of the gravid uterus, pressing upon the descending blood-vessels, especially the great aorta. This pressure below causes too much blood to flow to the head. The skull cannot yield to the pressure of the blood;



the brain becomes too much compressed, and the consequence is a pain in the head. In this case, the patient should always be bled from the arm.

Sometimes the bowels become loaded with hard, heavy fæces, and press upon the lower aorta, preventing the free circulation of the blood to the lower extremities, and consequently produce the same effect, or increase the effect of the gravid uterus, by confining too much blood in the head and chest. The patient suffers from shortness of breath, as well as headache. Bleeding, and some mild purgative medicine, such as the following, will be found beneficial :

*Recipe :* Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.

Form twenty pills. Take from four to six of these pills at bedtime, and repeat as many and as often as may be necessary to keep the bowels open ; or,

*Recipe :* Senna Leaves, one ounce.  
Pulv. Jalap, half ounce.  
Rhubarb, half ounce.  
Anise, or Fennel Seed, two drachms.

Boil all slowly in a quart of water, down to a pint; sweeten with brown sugar, and take a table spoonful night and morning, if less will not operate. Keep the bowels open.

There are few pregnant women, who are full of flesh and blood, who would not do better to be bled once or twice from the sixth month to the end of their pregnancy. In all cases where there is a disposition to headache, a light diet should be strictly observed. These directions should be closely attended to by every lady, if she wishes to enjoy health and escape the danger of convulsions.

### PART III.

#### PREPARING THE SYSTEM FOR DELIVERY.

WE have not seen this subject treated of separately by any author on midwifery, though it is one quite as important as many of which they have elaborately treated, and in many respects much more so. Much, in relation to the final issue, depends on the manner of living, and the mode of exercise of

women in a state of gestation. It is the common opinion, that a woman should, as the time of her delivery draws nigh, use more active exercise, and take more nourishing diet, in order to increase both her own strength and that of her babe, and thus, as it is supposed, enable her more safely to bear the trial through which she has to pass. It might appear, at the first view of this subject, that this opinion and practice are founded in reason; for, as the child approaches nearer to maturity, it certainly requires more nourishment than at an earlier date of its uterine existence. But we should not argue from this that the mother should take richer or more solid food, in order to supply the child with its due quantum of nourishment. The powers of digestion, if they are not weakened at this time, are certainly slower in the performance of their functions; yet they are no less certain. Hearty meals always produce a desire to be still; and rest aids digestion.

If no other consequence arise from the use of high-seasoned and rich food, it will produce corpulency and too much blood, and both of these are detrimental at the period of labor. From a rich diet, the muscles become hard and unyielding; the blood flows with too much rapidity to the head or lungs, and this creates, or increases, a liability to convulsions, or hemorrhage from the lungs. If, however, neither of these should follow, the patient will be sure to suffer from pains and cramps in the hips, thighs, legs or sides; and, from such causes, she must of necessity have a longer and harder labor, and also be more liable to have child-bed fever, or inflammation of the uterus. Laceration of the perineum, as well as inflammation of the breasts, is also much more apt to take place in a woman who is fleshy.

To avoid all this, the patient should live on a light diet, and reduce her flesh before the time of delivery.

A word or two as to diet. It is true, as stated in the commencement of this chapter, that the child requires more nourishment in the last two months of utero-gestation than it did at any previous period. This nourishment must, of course, be drawn entirely from the mother. Nevertheless, she should live light and sparingly, and her diet should be mostly vegetable. When the mother lives in this way, the child draws its full portion of nourishment from the mother's blood; and, by this means, the amount of that fluid being reduced, her flesh will become much softer; the space for the passage of the child will be larger in the

pelvis, and there will be less pressure on the nerves of these parts, by the passage of the head of the child, and little or no cramp produced. The muscles concerned and the perineum yield kindly to the pressure of the child, and there is less pain suffered by the woman, and the danger of a laceration of these parts in giving birth to the child will be almost entirely removed. The mother will also be less liable to convulsions in delivery; her labor will be very much shortened, and she will be less likely to suffer from inflammation of the vagina, or uterus, or child-bed fever. The child will also be better, because it will undergo less pressure in the birth.

With all these facts set before her, the mother will readily discover that, to prepare for delivery, she should, for two months before her confinement, take care that she does not live so as to increase her flesh and blood. If the patient is full of blood, she should be bled once or twice, moderately. Keep the bowels regularly open, and never suffer twenty-four hours to pass without an operation. The following pills will serve for this purpose:

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, —of each twenty grains.

Form twenty pills. Take three or four of these every night, or every other night, or just as many as will give one or two motions in the morning. If these pills cannot be procured, take castor-oil, or rhubarb, or a pill made of the extract of white walnut and rhubarb, or some other gentle purgative.

It is also a very important item in the case to keep the spirits cheerful, by a kind and courteous treatment. The reprehensible practice of relating to the patient every accident that has ever been heard or known to occur to women in her situation, should be avoided. There are some women in the world that never can rest when they hear of an accident happening to a woman in a state of pregnancy, or in labor, till they go and tell it to some friend in a similar condition. After having related the case, and painted it in all the blackness of coloring it admits of, they will say, I hope this will not be your case. This is often done, even while the woman is in labor. Such persons ought to have a patent right for killing their neighbors, through *kindness*, as they call it; for, in many cases, it amounts to little less than murder. All such conversation should be strictly forbidden. We are glad, however, to know it is becoming very unpopular amongst the

better part of society, and hope it will soon be done away everywhere. It cannot be told how much mischief such gossiping will do to a nervous, sensitive lady, and one who is full of apprehensions herself on this subject. She should rather be encouraged and comforted by all who are around her.

## CAUSE OF LABOR.

Much has been said on this subject by writers on midwifery. Some celebrated physicians suppose that the stirrings of the fœtus contribute to the production of labor, and that the child has much agency in its own delivery; others have declared that the desire of the child to have food, and to breathe, were the first causes of the contraction of the uterus; while others say, the liquor amnia becomes acrid, towards the latter period of gestation, and, by its stimulus, forces the womb to labor. But as this fluid does not come in contact with the surface of the womb, this opinion must go for naught, even if it were a fact that the waters did become acrid, which, however, has not been proved.

The explanation of Baudelouque is more plausible. He makes this process the result of a kind of mechanical necessity, and is of the opinion that the body and fundus of the womb, by their persevering alternate contractions, especially after the sixth month, oblige the neck of the uterus to unfold. The same agency, together with the weight of the child, constrains the os uteri to open, and labor takes place. This theory, however ingenious, will not hold good in many cases; since labor comes on spontaneously in some females at the seventh month of pregnancy, whilst others suffer abortion, at a certain period, without any known cause.

Mr. Power looks upon the process of labor as mechanical. The contents of the womb, according to his doctrine, act like a wedge, by forcing the os uteri, and so bring on labor. This theory, at the first view, has some plausibility; but, on examination of the subject, cannot be sustained. *Avicenna*, centuries ago, declared that labor was a law of God, and that it came on at the appointed time; and we would ask, if any hypothesis, since that time, has enlightened us more on this subject? It is short, and full of meaning. But an explanation of the manner of God's acting in this case would be more satisfactory, if it could be gained.

We will offer a few remarks on this subject. From the closest observation of anatomists it is satisfactorily ascertained, that the

uterus is composed of two sets of fibres, one of which runs longitudinally, and the other transversely. These fibres compose the principal part of the uterus, and are more abundant in some parts of it than in others. The longitudinal fibres, for example, are more abundant in the upper part of the womb than the transverse fibres are; and these, in turn, are more abundant in the body and middle portion of the uterus than they are in the fundus. The neck of the womb is almost entirely made up of transverse fibres running around it. Now, as the child grows and ascends into the cavity of the abdomen, occupying, as it does, the upper part of the womb, in the first months of gestation, it raises the fundus up. Hence, we find by examination, that the os uteri, or neck of the womb, is loose, and more or less pointed within the vagina, because the child does not bear upon that part, and also because the fibres of the body and fundus are incapable of further distension. But as the fœtus fills the cavity of the uterus to the extent of the capacity of its fibres, the fibres of the neck or cervix continuing to yield, by little and little, to the demand of the contents of the uterus, they become at last very thinly expanded, and the os uteri begins to open; not, however, by a force like that of a wedge, by a power applied above, but by a law of vital action, and, by this means, give the control to the longitudinal fibres. By this contraction, the uterus becomes shorter; and, consequently, must widen itself at its opening, by drawing the circular fibres upwards. When this happens, the mouth of the uterus has a tendency to be drawn upwards, also; and then the presenting part escapes from it, whether it be the membranes, the head of the child, a false conception, or any other body. Hence, after the complete expansion of the os uteri, its margin is often not to be found. But at other times it does not recede beyond the reach of the finger, owing to the strong action of the transverse fibres in the mouth of the womb. In this case, the os uteri will always advance before the head of the child; and though every way disposed to dilate freely, or yield to the passing head, it often remains in that situation, so as to become the cause of tedious or difficult labor. The sympathies between the transverse and longitudinal fibres are such, that any pressure from within or without, upon the os uteri, if it be calculated to open it, will excite more or less contraction of the longitudinal fibres, and so increase the pains of labor to a greater or less degree. We are satisfied as to the cor-



rectness of this conclusion; for much experience and close observation have brought us to it.

We would only say further, in case of false conception, it appears to be a law of nature, that when the growth is complete, nature demands a release from the foreign body, and a suitable action takes place for throwing it off. The uterus yields, a detachment takes place, more or less hemorrhage succeeds it, and contraction follows, as in labor; and the decidua, or false conception, is thrown off by a natural process, or it must be removed by art.

#### OF THE SIGNS OF APPROACHING LABOR.

Every change that takes place in the system, from conception to labor, may be called a separate process. Though it is intimately connected with the one which has immediately preceded it, yet, when properly considered, it will be found to be perfect in itself. Thus, previous to the act of parturition, many changes take place in the system, which point out to us that the period of delivery is near at hand. These are called the signs of approaching labor.

These signs may vary in the time of their appearance in different women, and in the same woman at different times of gestation. Sometimes they make their appearance two or three weeks before labor comes on; at other times they may appear only two or three days before that period. They always appear, however, sooner or later, before delivery, except when labor is brought on by some accidental circumstance. The more perfect these changes are, and the longer they occur before labor, the better for the patient generally, because the labor, in these cases, is more natural.

These signs are as follows: *First*. — The womb falls down, more or less, from the region of the stomach, towards the pubis, and the woman will appear smaller at the *middle* of the ninth month than at the *beginning* of it. Her shape changes in appearance also. These are favorable signs; for when the child continues to lie high, even after labor commences, the patient may expect that process to be tedious; because the fundus or upper part of the womb does not act properly.

*Secondly*. — The parts concerned in the act of parturition become enlarged, and appear to be swollen, yet they are soft and elastic, and not unfrequently a discharge takes place from them,

resembling the white of an egg, which tends to lubricate the parts, and cause them to dilate. This is also a favorable sign.

*Thirdly.*—The nearer the approach of labor, the more the breasts enlarge. There is either milk or a clear water in them. Sometimes this fluid is yellowish.

*Fourthly.*—The woman does not walk exactly as she did before she was so far gone in pregnancy. She rather leans her body from side to side, as though she would fall. Hence the term, falling to pieces, which is not an unapt expression, seeing it is indicated by the gait. This motion in walking is produced by the sacro-ischiatic ligaments relaxing; thereby causing the woman to move from side to side, rather than advance her feet directly forwards.

A lightness and activity are frequently felt just before labor commences. These feelings have not been experienced for several days before, and arise from the fact of the child's falling down a little, and relieving some of the blood-vessels and nerves from a pressure which had been on them for weeks. The woman now feels a disposition to take exercise. When these signs appear, the time is near at hand; and they also indicate safety and ease in delivery.

#### DIVISIONS OF LABOR.

Labor is divided into natural and preternatural. Natural labor is performed by the healthy and natural energies of the uterus, aided by the functional powers of various muscles. It is begun, continued, and completed by the powers of living functionaries intimately connected therewith.

Artificial labor is that where the functionaries are too weak to complete the process without the intervention of art; and hence it is called *artificial* labor.

About the end of the fortieth week, a painful effort is made by the uterus to expel its contents; and this effort is called labor. Sometimes this process commences by very slight movements, and can only be ascertained by placing the hand upon the abdomen; there being as yet no bearing down pains, but a simple contraction and hardening of the uterus, by intervals. With the first child this may be perceived sometimes for two or three days. In some cases, these slight contractions go off, and are not felt again for several days. They are called *false pains*. Labor rarely takes place so suddenly or so silently as not to present a

regular series of symptoms, which, from their universality, must be considered a part of this process. These symptoms may be divided into rigors and nervous symptoms; a frequent inclination to make water, in some; but in others there is a suppression of urine, or a difficulty in passing the water. In some cases, there is a frequent desire to go to the close stool. There is generally a subsiding of the abdominal tumor, and a secretion of mucus tinged with blood, a dilatation of the os uteri, and regular pains. All of these symptoms are to be met with, more or less, in different patients. Sometimes they make their appearance sooner, and sometimes later. Many women are much troubled with sickness at the stomach, and vomiting; indeed, this is the first symptom of labor with some; while in others it does not occur during the whole process. If a violent trembling takes place, whether it be early or late in labor, the os uteri will soon dilate; and generally the labor is soon terminated after this rigor subsides, provided no unnatural difficulty intervenes.

With young women we often see much restlessness, as tossing, and crying; but as soon as the expulsive efforts become strong, this irritable feeling subsides, and they become quiet. We should, in all cases, use soothing language, and do all that we can, by gentleness and tenderness of manner, to compose them.

Those rigors which succeed or precede labor are not the access of fever; and they require no medicines for their relief. The patient should lie still, and they will soon pass off without any bad effects. A frequent desire to use the close stool, or chamber, is an evidence that the head of the child lies low in the pelvis, and presses on the rectum, or bladder, and is generally the sign of a quick labor. The patient may be indulged in these inclinations till the head of the child begins to engage in the bones of the pelvis; after which she should not be allowed to arise from her bed.

The sinking of the uterus into the pelvis, or, as it is called, the falling of the child, has justly been considered a favorable circumstance. It declares two important facts: *first*, a healthy condition of the uterus; *secondly*, a good conformation of the pelvis.

The secretion of mucus is sometimes the first symptom of labor, even before any pain is felt. It is natural, and should be looked upon as favorable; and should not be removed by officious examinations, any more than can be avoided. It is the substance which nature supplies, to lubricate the parts, and

facilitate the passage of the head of the child through the vagina. It soothes those stinging pains that are felt in the os uteri, and aids the dilatation of these parts. A frequent touching of the glands that secrete it should be avoided, lest its secretions be, by this means, arrested; in which case, a hot, dry state of the parts will succeed, and thus the difficulty of labor will be increased. Let the midwife be careful, then, that she do not neglect or lose sight of this fact; and by all means abstain from a frequent handling of the parts.

#### ON THE POSITION OF A WOMAN DURING LABOR.

The position of a woman in labor is of more importance than many suppose it to be; and though authors on midwifery have said much concerning it, something more may be said to advantage.

Custom exercises great influence on this subject; and every author has advised that position which is most common in his own country. The English advise the patient to lie on her left side; while the prevailing custom in America,—we mean the common country practice,—is, to lay her on her back. The French use an arm-chair and a cushion seat; while, in some countries, a stool with a hole cut through the bottom is preferred. In many parts of Germany, the patient is made to take a kneeling posture; but in others, she is delivered standing on her feet. Some prefer that the patient should sit on the lap of a friend; while others lay her on her back on the floor. A pallet,—made by placing three chairs with the rounds or posts tied together, to prevent them slipping apart, and laying a thin mattress or straw bed on them, for the patient to lie on,—is preferred by others. In this position, her feet are supported on two stools or low chairs; and the midwife seats herself before her, with a sheet spread on her lap, for the purpose of receiving her child.

These various positions have been recommended by different writers and midwives, and have been practised according to the celebrity and influence possessed by their different advocates. Some have recommended a bedstead made with joints in the rails, so that the patient could be raised or lowered, as the case might require. Several of these positions have their advantages in particular presentations of the child, and in peculiar formations of the bones of the pelvis and sacrum, particularly the promontory of the sacrum.

The side or the pallet-bed will embrace all the advantages that can be derived from position. When the promontory of the sacrum is very high, the pallet-bed will allow you to raise the woman up to an angle of forty-five degrees, or one half erect, which will very much facilitate the passage of the child's head over this process. It will also be the best position where there is great anterior obliquity of the uterus. But for every other case of natural labor, the side is certainly the position to be preferred. If the child presents in the natural way, the patient should lie on her left side, which will give the accoucheur an opportunity to support the perineum with the left forefinger and thumb. But should the position of the child be such as to require it, the patient should be placed on the right side. In all cases of turning the child, the patient should lie on her back.

If the head of the child is in the left side of the mother, she should lie on her right side; but if the head is in the right side, she should lie on her left. There is no presentation of the child that will justify the midwife in placing the patient on her feet, or on a stool, for delivery; nor is the lap preferable to either. These three positions will subject the patient to flooding, inversion, or prolapsus of the uterus; all of which she might escape, if delivered either on her back or side. When she is placed in this last position, just before the child is born, a small pillow should be placed between her knees, so as to keep them about two inches apart. For when they are thus separated, the perineum is not so apt to suffer laceration as when they are wider apart. This is a safety to the mother that no other position can ensure.

We have now written all that is believed necessary on this part of our subject. It has been our object to embrace only those forms of labor and diseases which we thought would be most profitable to the midwife or mother, and we have given as full an account of them as the limits within which we must confine this volume would permit. We have purposely omitted any mention of those forms of labor that the midwife could not manage, as well as of those instruments which a woman has not nerve enough to use properly. At the same time, we know that there are many directions, in the management of the different forms of labor, that but few women can carry out. But we have given them in order that, when no physician is at hand, the midwife may be prepared to take advantage of them in her efforts to save the life of the mother or child, as it will be found that fifteen minutes delay may prove fatal to one or both.



Our constant effort has been to present the subject of which we were treating, in as clear and simple a manner as possible; and we wish it distinctly understood, that the work was undertaken and prepared expressly for the use of midwives and mothers.

#### OF THE MANAGEMENT OF LABOR.

On her arrival at the chamber of her patient, the first inquiries of the midwife should be concerning the following points: Have the pains yet come on? and if so, how long have they continued? Have they been severe or not? Have the waters been discharged? and if so, how long since? These inquiries being answered, if the pains are active, it will be necessary to examine the progress of the labor. This is done by first oiling the finger, and passing it gently into the vagina till it reaches the os uteri. The patient may lie either on her back or left side, during this examination, being covered to her head with a sheet or counterpane. Having reached the os uteri with the finger, she should then feel gently how much pressure the pain makes upon it. By this, the midwife may ascertain whether the contractions are strong or weak; whether the os uteri is soft and yielding, or hard and thick; whether it is situated immediately in a line with the axis of the pelvis; whether the waters are gathering; and also determine whether the head presents properly. This can be easily ascertained, if the head has advanced far enough to enable her to feel either the anterior or posterior fontanel or mould of the head. Having done all this,—which may be accomplished in one or two minutes,—if the parts and presentation are found to be favorable, the patient should be apprised of the fact in a cheerful manner; and even if these parts are unyielding, and the labor is not likely to terminate speedily, she should receive all the encouragement that can be given consistently with the nature of the case.

These directions should be attended to with the most scrupulous attention to modesty, decency and composure, on the part of the midwife, and with all due regard to the feelings of the patient.

If the bowels are costive, and you think there will be time for medicine to operate, give a dose of one of the following medicines:

*Recipe* : Castor-oil, one ounce for a dose.

Or,

*Recipe* : Fol. Senna, one ounce.  
Manna Flake, half ounce.

Boil to a strong tea, and give a tea cup half full, every half hour, till enough has been taken to produce operation.

But should there not be time for medicine to operate, an injection of warm water and molasses, or of thin gruel and hog's lard, may be given. A light, cool diet, should be used, and the patient kept still, if the labor is likely to prove tedious. It has been the practice of some midwives to require the patient to walk about the room, to quicken the labor; but this should not be allowed.

The midwife should carefully avoid repeating her examinations unnecessarily, as this takes away the natural secretions, makes the parts irritable, and causes the patient to suffer many pungent pains which she might have escaped.

When these preliminary steps have been taken, the patient should rest quietly, and be allowed to take any position she may like best.

When, by the increase and activity of the pains, it is thought that another examination is necessary, the patient should be so informed; and if her labor is progressing, and all things are right, her bed should be arranged for delivery. This is done by placing one or two blankets, — folded several times, — under the sheet, extending so low as to permit the patient to place her feet against the foot-board. It is always advisable to tie something to the opposite post, for her to hold in her hands when the pain is on; and she should lie on her left side, if the presentation of the child does not require another position; and thus the midwife can use her right hand. Her hips should lie within one foot of the edge of the bed. Her knees should be drawn up, and separated by a small pillow placed between them; her body bent forward, with her chin inclining towards her bosom. The windows of the patient's room should all be curtained, or the shutters closed. Her clothing should all be loosened from around her waist, and her petticoat drawn down to her feet, so that she may be entirely covered by it. A sheet should be folded and placed next to her body, inside of her under clothes. During her labor, the patient's drink should be cold water, which she may have as often as she chooses.

The midwife should now seat herself by the bedside, and carefully attend to the progress of the labor. If the os uteri relax and spread easily, and the water has collected so as to protrude the membranes through it at every pain, you may predict a speedy delivery. But should the os uteri be thick in its edges, the waters collect slowly, the parts refuse to yield kindly, the

perineum feel thick and firm, you may reasonably calculate that it will be sometime before delivery is accomplished. If the pulse be full, with or without pain in the head, and a rigid condition of the parts exist, as above described, the patient should be bled. It will cause the parts to relax, increase the action of the longitudinal fibres of the uterus, and relieve those cutting pains which so much harass the patient in this form of labor. When this is the case, she should be handled as little as possible; but she may be allowed to rise if she wishes to obey any of the calls of nature.

When the waters have gathered fully, if the parts yield kindly, the pains will be sufficient to discharge the waters. But if everything else is favorable, and the membranes are thick, and will not give way, they may be ruptured by the midwife, in order to let the waters escape; and if this is prudently done, the patient will be relieved of many severe pains. When the waters are discharged, either by the pains or the finger, and the head begins to engage in the bones of the pelvis, if the mouth of the womb continues to keep before the head of the child, and the perineum is soft and yielding, the mouth of the womb should be gently passed over the head of the child, first behind, or in that portion next the sacrum, and then before, under the pelvis. This will facilitate the delivery very much. But if the mouth of the womb comes down before the head of the child, and the perineum is thick and hard, and will not yield kindly to the pressure of the finger, the following medicine should be used:

*Recipe:* Extract Belladonna, one drachm.

Dissolve this in a pint of warm water and dip cloths in it, and keep them constantly applied to the perineum, wetting them frequently. This should be continued till the perineum becomes soft and yielding, when the mouth of the womb should be put over the child's head, as above directed, and there will be no danger of a laceration of the perineum. If the extract of belladonna cannot be had, take a handful of Jamestown or nightshade leaves, boil them in water, and wet the cloths in it, as above directed. These remedies are only necessary, however, where the patient will not bear the lancet; but if her pulse will justify its use, bleeding will remedy these evils. By the timely use of the above-named remedies, the laceration of the perineum will be prevented,—a result most earnestly to be desired. If the lancet be used, the patient should be bled till she faints, in order to

escape a laceration of the perineum. We have known a midwife to open a rigid perineum with a knife, and then boast of what she had done,—an act which ought to be a penitentiary offence.

Be careful, at all times, to preserve, as much as possible, the natural secretions of the parts. But should they become hot or dry, they must be kept moist with some kind of animal oil. When the pain is off, place the finger within the vagina, and gently press the perineum towards the back. The knees should be kept separated about two inches, as a wider separation will subject the perineum to laceration.

The patient should be directed to bring her chin towards her bosom, at every pain: her eyes should be shut, and her loins and hips as perfectly relaxed as possible. She should make no effort, unless she has a pain that bears down; but if she wish it, some assistant may hold the back during the continuance of a pain. The perineum must be carefully supported as the head of the child passes over it. This is done by placing the palm of the hand on it, grasping one side with the forefinger, and the other side with the thumb, and squeezing the finger and thumb together, so as to relieve that portion of the perineum that joins the sphincter muscle of the rectum. The right hand should, all this time, be employed in relieving the crown of the head from the pressure above, by bringing it forwards, and turning it outwards. During this operation, the patient should lie perfectly still, lest some injury be inflicted upon herself or child. The instant the child's head is born, a calm is felt by the patient; and the midwife should wait a short time for another pain, when the shoulders will come down; but if they are large, both should not be allowed to come down at once. And here, again, great care is necessary to prevent the laceration of the perineum; since more accidents of this kind have happened from the passage of the shoulder than the head. The midwife must gently pass her finger up, hook it in the under armpit of the child, and bring down the shoulder into the cavity of the pelvis, and then into the hollow of the sacrum. She should then press the upper shoulder up a little, and return her finger to the under shoulder; and while she again supports the perineum, as in the delivery of the head, bring the shoulder over the perineum; then bring down the other shoulder, and deliver the child by both. She must be careful not to use force, or pull by the child's neck, lest she should slip a joint, and thus kill the child.

As soon as the child is freed from the mother, bring it forward towards her thighs, and draw the bedclothes between it and the mother, that it may have a chance to breathe freely, and the mother be completely covered. Let the child breathe freely in this condition, for some minutes, and the circulation nearly or entirely stop, before the cord is tied. This may be done with a thread or tape string; apply it about an inch from the child, and tie it tight. Another may be placed two or three inches above the first, to keep the placental blood from flowing out on the bed. After the navel string is divided, give the child to the nurse, who will receive it in a sheet or soft blanket.

The midwife should now place her hand on the abdomen of the mother, and feel if the womb contracts firmly; if it does not, grasp the after-birth and womb,—through the abdominal muscles,—firmly in your hand, and gently move them till a permanent contraction is felt, and the patient experiences some pain. She may then let go her hold, and taking the cord in her hand, pass her finger gently along it, till she feels the after-birth, holding the cord moderately tight with the left hand. She may then hook the forefinger of her right hand into the after-birth, and gently bring it away. After it is removed, she should apply the forefinger on one side and the thumb on the other of the vulva, and gently press upwards for a minute; and, by this means, relieve the birth of the child. A large, soft napkin should be applied to her, and the sheet that is next to her should be removed, and her clothes drawn down to her feet. Let her then be straightened up in the bed, when the midwife should again apply her hand to the abdomen, and feel if the womb has contracted firmly. If it has not, grasp it as before, and move it a little, till it does contract. A bandage which will reach from the hips to the stomach, and broad enough to cover two or three inches of the upper portion of the hip bones, should then be applied, and be pinned or tied as tight as the patient can conveniently bear it. All this should be done by the midwife before she leaves the patient for one moment; after which, she may lay her on her right side, cover her comfortably, and leave her to rest. If she wishes a drink of cold water, let her have it.

It must be understood that what we have said above relates to natural and uninterrupted labor, there being no difficulty either with the mother or child. But the child does not always cry aloud when it is born; and when this is the case, the midwife should immediately feel the cord to ascertain if the circulation in



it is strong. If so, it is probable that the child suffers from phlegm or mucus in the mouth or throat. To relieve it from this, she may wrap a piece of fine, soft linen round her finger, and introduce it into the mouth of the child, even down to the root of the tongue, and clear away the phlegm. If the child does not cry when this is effected, she should raise its body up, turn its head down, and shake the child gently. After this is done, if the child does not breathe freely, its breast and abdomen should be rubbed with a little spirits; after which, if the circulation is still going on in the cord, the child will soon cry aloud; perhaps, at first, by convulsive sobs, and presently by a loud cry.

But we are not always so fortunate. The child may not cry at all when it is first born; and this may be owing to hard and close pressure in the bones, or it may be naturally weak. In this case, if there be no circulation in the cord, if the child's face and lips are livid, and its belly flat or fallen in, the cord should be cut immediately, in order to let a little blood escape. This will relieve the brain and lungs from the apoplectic state into which they had been thrown by the hard labor. The child should then be wrapped in warm flannel, and the lungs cleared as above directed. If it does not yet breathe, its lungs should be inflated, by some one blowing into them; but this must never be done by any one who uses tobacco in any form, as the breath of a smoker, snuffer, or chewer, will kill the child. After the lungs have been inflated, gently press on the sides of the chest, to cause the air to escape; and let this be repeated several times. Let the child's head, breast and private parts be wet occasionally with spirits; and do not soon be wearied in this matter; for many children have been brought to breathe and live, that have remained silent for fifteen or twenty minutes after they were born.

Some recommend warm water, and the bath is resorted to immediately, and the child kept in it for fifteen or twenty minutes. But though the child may, by possibility, live after being placed in the warm bath, we are fully persuaded it is not the best course to pursue. On the contrary, indeed, we are satisfied that the warm bath, in these cases, always does harm, as well as in those where the child is pale and flaccid when born. If the child survives a long bathing, it is a triumph of nature over a bad remedy. Others use a dash of cold water over the breast of the child, and with more good reason and philosophy; for this is a stimulus of the tonic kind, and that is what the child needs. Warm water is a stimulus, it is true, but of a

relaxing nature, and increases what we wish to remove. If either is used, cold water is decidedly the best; but if the cold is used, the child should be immediately wrapped in a dry, warm blanket.

The practice of turning the child's head down to relieve the throat of mucus has been objected to by some, but without any good reason. The objection is, that it causes too much blood to flow to the brain. Let us examine this reasoning.

The child has not yet breathed; and its head has been down for three or four months. This is its natural position till it does breathe. How, therefore, can it suffer from the head being turned downwards? To this it may be replied, that the action of the air upon the child's body makes a great difference. But let experience speak, instead of theory, and it will teach us that the child will not suffer from being placed in that position for a few minutes.

Again. It will be found that warm, dry blankets are better than warm water, to resuscitate a child. The unskilful practice of giving ergot, to hasten labor, has caused hundreds of gallons of water to be heated for the resuscitation of the child, where not one drop would have been needed, if nature had been allowed to do her own work. Some French writers have advised the lungs to be inflated, by blowing through a tube passed into the wind-pipe. But these organs are too tender for such an operation as this, even if the midwife should have a suitable tube at hand.

When the cord is cut for the purpose of relieving the lungs or brain of the child by bleeding, it should be tied again as soon as the child begins to breathe. When it is sufficiently recovered, the nurse should wash it in tepid water; and, if there is much white gum on the child, a little lard should be rubbed on it, till the gum is softened, after which it may be washed in a little mild soap, or spirits and water.

The navel string should be passed through a hole in a linen or cotton cloth, which should be folded upwards, then from each side, so that it may be completely covered, while it is not allowed to be in contact with the child.

The waistband should next be applied. This may be of linen, cotton or flannel; but linen will not of course be used in cold weather. The band should be laid on smooth and tolerably tight, and may be fastened with tapes and pins; though tapes are the best. The balance of the dressing should be put on loosely, and with as few pins as possible. Strings or tapes, in all cases, are better than pins.

We now return to the mother. If she is weak, and feels no pain, the midwife should place her hand on the abdomen; and if she feels the womb in a hard lump, low down near the pelvis, tonic contraction has taken place, and the after-birth will be found within, or near the pelvis. She should then introduce the forefinger of the right hand along the cord, into the fold of the placenta, and take it gently away. But if the uterus has not contracted, but lies flat in the abdomen, there is great danger of flooding. She should spread her hand and grasp as much of the abdominal muscles as she can; press, and at the same time, shake them gently, a little. If this should not cause contraction to take place, she should then rub her hand over the abdomen with a smart friction; but should this fail to produce contraction, let her take some spirits of camphor, or whiskey, and rub the abdomen with it, with a quick motion. Should this also fail to have the desired effect, give the following medicine:

*Recipe:* Pulverized Ergot, twenty grains.  
Sugar, one tea spoonful.

Mix, and give the patient. As soon as the uterus begins to draw up in a hard knot, encourage it by friction, till it remains in a ball, near the pelvis, when a broad bandage, firmly applied, will secure the patient from flooding. If she is faint at this time give her a little wine and water, or spirits and water, or essence of peppermint in water. If none of these are at hand, give a little of any kind of stimulus that may be present.

The patient should now be left to rest till she feels recovered, before her clothing is changed; but after she is rested, she may be comfortably fixed in bed.

These directions may suffice for all kinds of labor, after the child is born; though each form of labor must be treated according to the demand of the particular case.

#### OF THE DIFFERENT PRESENTATIONS OF THE HEAD.

Besides the presentations described in natural labor, there are six more. These are called preternatural, or unnatural presentations. The *first* is, when the posterior fontanel presents itself behind the left acetabulum, while the anterior is placed before the right sacro-iliac-junction. The sagittal suture must, therefore, traverse the superior strait obliquely. The head of the child, in this presentation, offers itself in an oblique position, as it regards the superior strait. By the contractions of the uterus, the vertex is made to sink lower in the pelvis than any other portion of the

head, and, at the same time, to place the chin of the child on its own breast. The head always enters the pelvis at an angle of about thirty degrees, from a right line with the superior strait. It descends, in this way, till it is changed by the ischiatic ligaments and perineum. When the head arrives at the first part, the fontanel is forced to offer itself to the arch of the pubis; and in doing this, the neck is slightly twisted, as it were, on a pivot, but the trunk does not perform a similar motion. In proportion as the head is urged forward, the sutures on the top of the head can be felt more distinctly below the pubis. If the head be not unusually large, the pelvis a little contracted, or the sacrum too strait, the back of the head will be found to correspond with the centre of the pubis. But if either of these circumstances presents itself, it will be perceived to answer to the left leg of the pelvis, and ischium. At this moment, the chin of the child, which had hitherto been placed on its breast, begins to depart from it; the vertex advances, and separates the external parts by engaging under the pubis, whence it rises up towards the *mons veneris*. The inferior edge of the symphysis pubis answers as a kind of axis for the head to turn upon; in doing which, it describes about a quarter of a circle backwards. For the head, in issuing from the pelvis, obliges the chin to describe an excessive curve, passing successively over the whole line of the sacrum, coccyx, and perineum, while the vertex itself passes through a small space. As soon as the head passes through the external parts, the face usually turns towards the right thigh. You have then to deliver the shoulders and body, and the process is over.

The *second* presentation is exactly like the one just described, except that it is reversed in all its positions and movements. It requires exactly the same treatment. It is thought, by some, to be not quite so favorable a presentation; but we have found no difference.

The *third* presentation is where the posterior fontanel presents to the pubis. In this case, if the pelvis is well shaped, the labor will go on without difficulty. The precise little motions and turns attending this presentation, are unimportant to the common midwife, and need not be described here. In ninety-nine cases out of a hundred, the labor will go on well; and unless the midwife is very skilful, she will not know that the presentation is wrong.

The *fourth* presentation is that of the forehead. This species of labor is necessarily more difficult and painful than those just



described, and it sometimes becomes extremely so. If the head be relatively, or positively, large for the pelvis, it requires much more time to accomplish the labor; and the patient experiences much more suffering than she does when either of the former presentations takes place; especially if the soft parts give much resistance. We must, then, alter this presentation, and change it to the first or second. This is to be done in the following manner. If the waters are discharged, the parts well dilated, and the pains active, let the patient be placed in the most favorable position, according to the side to which it is desired to turn the child. In the absence of pain, the midwife should place her forefinger on the child's head, and pass it to the right or left, as it may move most easily. When she has gained all she can, she should hold it there during the next pain; and when it has passed off, press the head further, and continue this action with the finger, till the head is brought either to the first or second presentation. So absolutely necessary is a knowledge of these presentations, and skill in changing this into some other, that no one is qualified to practise midwifery who does not understand them, or is unable to accomplish the necessary changes when they are required. This duty, which is easily accomplished by those who understand it, will relieve the patient of many hours of hard labor, and perhaps save the life of the child.

We are aware that some object to alter the position of the child in this presentation. To say the least of it, the objection savors very little of humanity, tender feeling for the patient, or regard for the child.

The *fifth* presentation is very much like the fourth, except that the anterior fontanel is placed to the right acetabulum. Now, if the midwife recollect the mechanism of the fourth vertex presentation, she has this very nearly. In this presentation, a little more difficulty may be expected than in the fourth, owing to the contingencies which may make the second not so favorable as the first, as has been already stated. When the face escapes from the vulva, it will almost always turn towards the right groin. The efforts of the uterus sometimes reduce this case to a first presentation; we should then profit by this, and do likewise.

The *sixth* presentation is of very rare occurrence, and is found, for the most part, in cases of twins. Fortunately, when there are twins, the head is small, and the difficulty is thus decreased. In this presentation, the anterior fontanel is immediately behind the symphysis pubis, and all the midwife has to do, is to pass up the



fingers, and turn the anterior fontanel toward some of the acetabula. But the parts must be well relaxed before this is attempted. The natural powers of the uterus will soon complete the case.

It will be perceived in a moment, that the character of this case is exactly the reverse of the third presentation; that is, the anterior fontanel is placed behind the symphysis pubis, and the posterior before the sacrum.

#### PRESENTATION OF THE FACE.

There are but two presentations of the face.

*First*.—Where the forehead offers to the left, and the chin to the right side of the pelvis. The *second* is just the reverse of this.

A presentation of the face may be easily known by the touch; by which the eyes, mouth, nose, and forehead, may all be detected. We must either leave this case to nature, or deliver artificially, by turning or by instruments. Turning the head, or rectifying the position, is the safest, when it can be done. To do this, the parts being prepared, and the patient properly placed, the midwife should pass the palm of her hand over the forehead of the child, place her thumb on the forehead, and, seizing the vertex in her fingers, push the forehead up with the thumb, and bring down the crown with the fingers. This should be done when there is no pain, and the advantage gained should be firmly maintained. If with the next pain the crown comes down, she should take her hand out, and bring the crown as low down with it as she can. But, if the first effort is not successful, it must be attempted again and again till it is. In this operation, the chin goes back upon the breast of the child, and the crown of the head engages in the superior strait. The labor should be allowed to go on in the usual way.

Delivering with the forceps is more severe to the mother, and more dangerous to the child. When the child is delivered by the natural process, with the face foremost, it will be found to be in a state of asphyxia, or suffocation, and perhaps may never come to; though this is not always the case. This is a very painful labor, as well as a difficult one to manage, and is deservedly dreaded both by the patient and operator.

#### PRESENTATION OF THE HEAD WITH THE HAND.

The presentation of the head with the hand often happens. The hand may be felt, sometimes, through the membranes, before

the waters escape; and, when this is the case, it is sure to come down with the head, or before it.

As soon as the head is found to be presenting, if the waters are gathering freely, and the os uteri be relaxed, the midwife should break the membranes, and place her finger between those of the child, and, at every pain, push its hand up, and towards its face, so that the head may pass down, and the hand up, till the head is fully engaged in the superior strait. The head will then pass into the pelvis, and the hand turn on the breast of the child without any further assistance. But should this be neglected, and the hands allowed to come before the head, the patient must be delivered with forceps. In all cases she must avoid pulling at the hand.

The hand may present with the knees, breech, or feet; but here it will be found an easy matter to keep it back, and let the other presentation,—be it which it may,—come forward, for the child may be safely delivered by either of them.

#### PRESENTATION OF THE BREECH.

Next to those of the head, the presentation of the breech is most frequent. It has its variations, also, as well as those of the head.

It is sometimes difficult to distinguish a presentation of the breech from that of the head. In some of its forms, a locked head resembles a breech presentation very much; so much so, that it has sometimes been mistaken for it. The signs of a breech presentation are, for the most part, these: a soft, roundish tumor, entering the pelvis, the presence of the foreshet, and sometimes a discharge of the meconium. This, however, is discharged in other presentations. We cannot decide with certainty on this presentation, till the waters are discharged; when, not only the foreshet, but the *nates*, and the genital organs, may be felt. A breech presentation, as it respects the mother, is as easy as those of the head; so far, at least, as the delivery of the body of the child is concerned. But in the delivery of the shoulders and head, the rules laid down on this subject, in the operation of turning the child, must be strictly attended to; for then it becomes, to all intents and purposes, a case of that description, as far as the delivery of the several parts is concerned. We believe that breech presentations are safer for the child than those of the knees or feet, because the breech is nearly equal to the head of the child in size, and, consequently, when it passes first, there will be the

less difficulty attending the passage of the head. But where the knees or feet present, they pass with less dilatation of the parts; and, consequently, there is greater risk in the passage of the head. Though the breech presentation may be a little harder for the mother, it is safer for the child.

There are four presentations of the breech above the pelvis: *First*, where the spine and sacrum offer to the left side. *Second*, where this is reversed. *Third*, where the spine and sacrum are behind the pubis. *Fourth*, where this is reversed, or where the back of the child is toward the back of the mother. But this is, fortunately, of rare occurrence.

In either of the first two, whichever hip presents, it may be suffered to come down till it enters the pelvis; when the action of the uterus will press the child into the most favorable diameter of the pelvis. The midwife may then proceed to deliver, giving attention to the caution in the chapter on turning; always using particular care not to let the longest diameter of the head engage in the shortest diameter of the pelvis.

In the third presentation of the breech, the belly of the child lies towards the back of the mother, and the back and spine pass out under the symphysis pubis. When the body is delivered, great care must be taken that the head does not become firmly fixed, by resting it on the pubis, and the chin on the promontory of the sacrum. To prevent this, the head may be turned gently with the finger, so as to make the long diameter of the head correspond with that of the pelvis: that is, from right to left, or a little diagonally, as in the two former presentations. Delivery is then accomplished as before directed.

In the fourth presentation, if the time allows, the midwife should bring down the feet and turn the child. If she cannot succeed in changing the position of its head, she will generally find that the case will prove fatal to the child; but the action of the uterus alone sometimes effects this change. All labors in breech presentations are slower and more fatiguing to the mother, and attended with greater danger to the child. Any of the causes that may occur in other presentations to make the labor preternatural, may also occur in this; such as, flooding, fainting, convulsions, bleeding from within or without the uterus, general prostration of the system, and entire loss of the contractile powers of the uterus, &c. In either of these cases, she must proceed according to the directions given in the chapter on complicated labor.

## PRESENTATION OF THE FEET.

After the feet have passed the internal parts of the mother, the labor must be conducted exactly as in the presentations of the breech, just described. It will, therefore, only be necessary to give some directions for the management of the case before the feet descend.

If it is necessary to expedite the labor, and the feet are above the superior strait, the midwife should pass her fingers gently up, till she can grasp them; having done which, she must draw them down slowly. But should this require much force, she must desist, and raise the hips of the patient upwards, as this will either cause the feet of the child to descend, or enable the midwife to bring them down easily. If possible, both feet should be thus brought down together; but should this prove impracticable, if the child is small, and the pelvis well formed, she may proceed to deliver by one foot. But if she cannot bring down one foot easily, she must search for the other, and bring down both together. In doing this, it is very important to use the hand, the palm of which will most easily touch the belly of the child. When she has found the feet, place one finger between the ankle-bones, grasp the legs firmly, and draw them down slowly. After this, the case should be managed as in a presentation of the breech. In a case of twins, care must be taken to seize the feet of the same child; otherwise, great difficulty will be experienced in correcting them afterwards.

It is hardly necessary to give directions for distinguishing the foot from the hand,—the toes, bottom of the foot, and heel, are all so easily distinguished from the palm, thumb and fingers. Palm to palm, will always give the hand presenting; the thumb to the great toe, will always give the foot presenting. The right corresponds to the right, and the left to the left, both in the hand and foot.

## PRESENTATION OF THE HAND, ARM, OR SHOULDER.

One hand or both may present; or one arm, as the elbow, or one shoulder. If the hand present, the midwife must learn the position of the shoulder from that of the hand. If the right hand present, with the palm upwards, the shoulder and head of the child will be on the patient's right side or groin; as the patient is understood to be on her back, in these presentations, the child's

face will be towards the abdomen of the mother, and its back to her back. The feet will then be in the left groin, and between the child and the abdomen of the mother. If the palm of the child's hand be downwards, then the parts just described will occupy the same region; but their position will be exactly reversed in relation to the mother. If the left hand present, with the palm upwards, the shoulder and the head will be in the left side of the mother, and the face of the child will be towards the mother's abdomen, and its back to her back. The feet of the child will be towards the abdomen of the mother. If the palm of the hand be downwards, the shoulder and the head of the child will be in the left side; but their position in relation to the mother will be exactly reversed from that in which the palm of the hand is upwards.

The hand presenting may be determined to be the right or left, by this rule: place the child's hand in your own, palm to palm, and if thumb answers to thumb, you determine the hand presenting by the hand you use.

A presentation of the elbow may be determined by the point of the elbow, it being sharper than the knee; or by ascertaining which way the bending of the elbow would carry the hand. If it go to the right of the mother, then the right elbow of the child is presented; if to the left, it is the left elbow; for the hand always passes towards the head of the child, whether it goes to the right or left; and the palm of the hand always answers to the face of the child, whether it be up or down. The feet always correspond to the face, as it relates to the position of the child, in reference to the parts of the mother's back or abdomen. A thorough knowledge of these presentations is of indispensable importance in turning the child.

In the first and fourth presentations of the hand, the *right* hand of the operator must be used in turning the child; but in the second and third, she must use the *left* hand. Without paying particular attention to these directions, she will not be able to turn the child, with safety to itself or the mother.

There has been much said about spontaneous evolutions of the child, in hand or arm presentations, and it may all be true. We, however, have never seen it occur. Much has been said, also, about bringing down the head, in presentations of the arm, where that limb was fully delivered, and the shoulder impacted in the pelvis. But we never have been able to succeed in effecting this, nor have we ever seen any one that did. We often



bring down the head, when the hand presents with it; but this is a very different case from that which we are considering; and it is one for which we know of but two remedies, viz.: *first*, turning; *second*, dismembering the child. The first may possibly be done with safety to both parties, though the condition of the child is a very dangerous one. If you can succeed in relaxing the system, so that the shoulder may be dislodged, and returned, with the arm, into the uterus, the child may then be turned. But should the remedies prescribed, such as opium, the lancet, anodyne injections, etc., prove ineffectual in relaxing the os uteri sufficiently, and in allaying pain, then try the following:

*Recipe*: Extract Belladonna, one drachm.

Dissolve it in one pint of hot water, and apply cloths wet in it to the vulva and vagina. If, by continuing this application for half an hour, the parts should not yield sufficiently, then soften one drachm of the belladonna, and with the finger apply it to the os uteri, inside and out. Let it remain on these parts; for we never knew this application to fail in arresting the pain, and relaxing the os and cervix uteri. When the relaxation is sufficient, and the pains suspended, the midwife may return the shoulder and arm into the uterus, and bring down the feet into the vagina. But here she must stop, and let them remain till the pains return, which will be in from one to two hours. In the mean time, she must be careful that the slight contractions of the uterus do not draw the feet back again into the cavity. The delivery of the child must not be attempted until the energies of the uterus are fully restored, or the patient may be subjected to a dangerous hemorrhage. But should the efforts return, though feebly, and the patient be likely to sink from exhaustion, the ergot should be given in the usual way. In this case, the child is in great danger; but it is better to save the mother than to sacrifice both mother and child. Belladonna is also believed to be a good remedy; we have tried it, and it has realized all our expectations. It is not to be denied that the operation of turning is frequently fatal to the child. Yet it is sometimes successful; while the knife is always fatal,—at least to the child,—and, if unskilfully used, may be equally so to the mother.

The operation of turning is a delicate one, and requires to be skilfully performed; for an awkward movement may prove fatal both to mother and child. The hand of the midwife should be

carefully introduced into the uterus; and when the parts are properly prepared, the patient will sustain no injury from the size of the hand.

The second remedy resorted to for delivery in shoulder presentations, is cutting instruments. There are various methods prescribed for the operation for which they are designed; and they who are curious to know them may read *Dewees*, *Denman*, *Meriman*, *Smellie*, *Baudeloque*, *Burns*, and twenty others, if they choose. As a surgeon must necessarily be called in, when any operation of this kind is demanded, we shall say nothing more on the subject, except to remark that if the instrument be in the hand of a skilful operator, the patient will not be conscious of pain occasioned by, or dreaded from, its use.

#### PRESENTATION OF THE SIDE, BACK, OR ABDOMEN.

If the side present, the position of the head may always be ascertained by observing these rules: *First*. If the right side of the child present, the superior portion of the ilium will be felt in the left hip of the mother, (or to her left side;) the back of the child, in this presentation, being to the mother's back, its feet folded upon its abdomen, and its head in her right side, with its crown near the sacro-iliac symphysis. *Secondly*. If the left side of the child present, the superior portion of its ilium will be found in the right side of the mother, its back to her back, its head in her left side, and its feet folded up, as in the other case, on its belly. *Thirdly*. If the child's back is in the abdomen of its mother, all the presentations and positions will be found reversed, so that the feet of the child, in every case of their presentation, will be to the mother's back. *Fourthly*. In the fourth presentation of the side, if the head of the child be turned to the other side of the mother, this presentation will be the result. All the positions correspond to this reversed condition of the superior portion of the ilium.

In all these cases, the child must be turned; and it will be found easier to take the feet than the head, except that in the third and fourth presentations it will be difficult to get more than one foot at a time. In the first and second presentations, the right hand must be used in turning, and the left in the third and fourth. Though the feet are easily reached in these cases, it is not the safest course for the child. The head can, sometimes, be brought down; and when this can be done, it should never be omitted. Turning by the head is not more painful to the mother

than by the feet; and, therefore, when practicable, it should always be done. This may be effected, when the child lies in the first position, by passing the hand through the os uteri, and carrying it a little under the child's back and hips, gently pressing them upwards, and, at the same time, turning the back of the child towards the back of the mother. This affords an opportunity of bringing the crown of its head to the superior strait of the pelvis. But care should be taken that its back be not strained too suddenly, or with too much force, lest an injury to the neck or spine be the result. A steady and gentle pressure will most surely effect it. When the head is placed in such a position that the efforts of the uterus will carry it down, and every pain corrects it by little and little, the case may then be safely left to the efforts of the uterus, if the patient lie on the side that will leave the head uppermost. The labor will be a little tedious, but the head will presently come down into the pelvis, and make its turns so as to adapt itself to the diameter of that organ. When the child is born, there will be a swelling of the skin on that portion of the head that first presented to the strait of the pelvis. This swelling should be bathed with spirits, two or three times a day, for a few days, after which it will all subside.

When the back presents, it may be ascertained as soon as the waters break; for the joints of the back may be felt, or the edge of the shoulder-blade. The backbone may be a little above or below the lateral axis of the pelvis; but this will make but little difference in the treatment to be pursued. In this case, the fingers of the child are all above and out of the reach of the operator. Though the operation, in this case, is more simple than in the other, yet it requires great care in bringing down the head. The midwife must first press the back up as far as she can, till the head can be brought down without producing too great a curvature of the spine; otherwise a serious injury may be done to it. When the head is brought to a safe position, nature will complete the delivery, if she be not interrupted, and nothing else is the matter. When the abdomen is presented, the feet can be brought down with great care, and without any injury to the mother or child.

Delivery is effected in this case as in all other cases of delivery by the feet. The navel string must not be brought between the legs, but should always be passed over one foot or the other, care being taken that it is not tied round both legs.

## COMPLICATED LABOR.

Labor is said to be complicated, when it is attended with flooding, convulsion, and some other phenomena not common to labor.

And first, of flooding. When this takes place during labor, it naturally and justly excites alarm, whether the labor be natural or preternatural. Flooding may take place under two different circumstances of the uterus, after labor has commenced: *First*, when the os uteri has partially dilated and is rigid; and, *second*, when the os uteri is dilated or dilatable. These two conditions should never be overlooked. — *Dewees*.

If flooding should take place in the first mentioned condition of the uterus, an attempt to hasten delivery would be very imprudent. The result will be defeat, and an increased loss of blood. Absolute rest should be enjoined; and application made of cold cloths to the vulva and back. They may also be laid on the abdomen. The following medicine should be given:

*Recipe*: Pulv. Opium, four grains.  
Sugar Lead, twenty grains.

Mix in four powders, and give one every half hour, in sugar, or sirup, till the flooding is checked. Should these remedies fail, soft cloths, dipped in cold water, must be placed in the vagina; and ice-water may be used, if necessary. As soon as the parts become sufficiently relaxed, the course prescribed in the second species of labor must be pursued. *Secondly*.—Flooding may take place when the os uteri is dilated, or dilatable. When it occurs under either of these conditions of the uterus, if the waters are gathered, or gathering, the membranes must be ruptured, and contraction of the womb excited, by dilating the os uteri with the finger. If this fail, the ergot must be employed; and if it should also fail,—the head being in a suitable condition,—delivery may be attempted with the forceps. But if the head is not in a position to allow this instrument to be used, the child must be turned, if it is possible to perform that operation. (*See directions for turning.*)

The second cause of complicated labor is convulsions; to which the pregnant woman is liable at any period of gestation, as well as in labor. When they occur at any time before labor commences, and especially in the early stage of pregnancy, they are much more easily treated than when they present themselves during the process of labor. We are told by *Baudeloque*, that

he knew a woman who suffered convulsions, every month, from the time her catamenia were arrested by pregnancy, till she was delivered at her full period. The paroxysms were of different periods of duration, lasting from half an hour to three hours, but we suppose they were of an hysterical character. Other cases have occurred, in which convulsions did not come on till the seventh month, or even later. The danger increases in proportion as they come on nearer to the full period of gestation. They give, generally, but little, if any, warning. Sometimes the patient feels a sensation of fulness in her head, or hears a ringing sound in her ears, with more or less of vertigo; the face is generally flushed, and the eyes look heavy and dull.

The fit is extremely rapid in its approach. The whole system is thrown into a state of violent spasm; the features are distorted; the saliva works out of the mouth, and, sometimes, the nose; the tongue is liable to be chewed or cut by the teeth; the hands, arms, and feet, are violently agitated; the fingers are clenched; the body is strained and stiffened to a very great degree; the face becomes livid; the lips swell; the eyes are suffused, and red with blood, and the power of voluntary motion is lost. A state of entire unconsciousness pervades the body and mind; and frequently both urine and stools are involuntarily voided during the fit. This convulsive action continues for a longer or shorter period, and may last from five minutes to three hours.

When the spasm has passed off, the patient sinks into a comatose state; with deep, slow, heavy breathing, and sometimes a loud snore. From this state, all attempts to rouse her will be vain; but, if let alone, she will probably awake, after some time has elapsed, and speak feebly, but will not appear to be conscious of anything that has happened during the fit.

Those women who are liable to convulsions generally have broad, high shoulders, a short, thick neck, large head, short, thick body, and are disposed to plethora; are generally hearty eaters, and of a costive habit of body; but, occasionally, women of all figures and states of health have been attacked with convulsions.

TREATMENT. — There has been a great variety of remedies proposed for the cure of this disease. Some give anti-spasmodics, as opium, castor, asafoetida, &c., with loss of blood from the foot, and direct the bowels to be kept open with gentle medicines. This is the treatment they adopt in those cases that occur before



the full period of gestation. But to us, this course of treatment appears entirely inadequate to the purpose of arresting the disease. We have seen all these remedies used, without any good effect; but, on the contrary, much harm, since the physician lost much time, while the patient was suffering the violence of the disease.

We would not be understood to say, that keeping the bowels open is unnecessary; on the contrary, it is very important. But to rely on this, or opiates and anti-spasmodics, for a cure, is only to abandon the patient to her fate; in plain terms, to stand by and see her die. The *lancet* is the sheet-anchor of every successful practitioner in this disease; and without it, the other remedies named above are entirely worthless. Immediately on an attack of this species of convulsions, the patient should be very freely bled; a vein in each arm may be opened, if necessary; but whether from one or both, the vein from which it is drawn must be opened by a large orifice, or it will do but little, if any, good. On the contrary, it may cause much harm; because the blood-vessels will contract, and prevent the blood from flowing; the consequence of which will be, that the brain will suffer that species of violence from which it may never recover. Hence, blood-letting has been condemned in this, and many other diseases, when the fault is not in the *remedy*, but in the *manner of using it*. But, as the object of bleeding is the relief of the patient, it should be continued, without regard to the quantity taken, until that object is secured. After this end is attained, the bowels must be kept freely open, and a low diet and absolute rest must be strictly enjoined; avoiding everything that is calculated to excite either mind or body. The following medicines may be given first:

*Recipe:* Calomel, thirty grains.  
Scammony, ten grains.

Mix in sirup, and give it for a dose. If this should not operate in three hours, give:

*Recipe:* Scammony, twenty grains.  
Aloes Pulv., twenty grains.  
Pulv. Rhubarb, twenty grains.  
Tartar Emetic, one grain.

Form twenty pills, and give two every two hours, till the bowels are freely moved. After this, they may be kept open with some of the above pills, or with,

*Recipe*: Castor-Oil, one ounce,  
for a dose; or,

*Recipe*: Fol. Senna, one ounce.  
Manna Flake, one ounce.

Boiled to a strong tea, in a pint of water. A tea cupful, three or four times a day, will be sufficient. The diet should be gruel, rice, cool tea, soft toast, bread soup, etc.

The following cases, out of a great number, will illustrate this mode of practice.

The first case is one that occurred between the sixth and seventh month of pregnancy. The patient was a yellow woman, belonging to a gentleman in the town of Newcastle, Ky. She was about seventeen or eighteen years old. Her body was short and thick; perhaps she did not weigh more than ninety or a hundred pounds. On being attacked in her first pregnancy with a convulsion, the family physician was sent for, who bled her from the arm, ten or twelve ounces. After some hours, she became rational. He then ordered a cathartic of senna tea and salts, which operated. In six or eight hours, she was again attacked with convulsion. The same physician was again summoned to her, but refused to bleed her again. We were then sent for; and, on our arrival, found her still laboring in the fit. We insisted on bleeding her again; to which the physician reluctantly consented, remarking that we must bear the responsibility, to which we readily consented. She was accordingly bled, and lost about thirty ounces. The convulsion soon subsided, and, after some time, she spoke. The attending physician wished to give an opiate, to which we constantly objected, and proposed a large dose of calomel, to be followed by castor-oil and injections. With great reluctance he consented to this prescription, and it was accordingly given. In five or six hours, we were again called to see her, together with the family physician. She was in another fit, and we again proposed the use of the lancet; but he would not consent to its further use, and urged the propriety of giving anodyne injections, composed of laudanum, tincture of asafœtida, etc. This we firmly opposed, believing it would be a pernicious practice, and proposed sending for another physician, to which he assented, saying, "When he comes, you will have to yield." Dr. D. was sent for; and, on his arrival, the case, with the previous treatment, was briefly laid before him. The question, "What shall be done?" was asked. Dr. D. did not hesitate a moment, but immediately

advised a repetition of the bleeding. With this, Dr. G., the family physician, relinquished the case, nor did he return to see his patient again. The mistress of the girl, overhearing our consultation, approached us, and said: "Doctors, my girl is in your hands, do what you please for her." Her arm was immediately tied, and about twenty ounces of blood taken; and before the bleeding was over, she opened her eyes, and spoke. In half an hour, the calomel operated. The after treatment consisted in keeping her bowels open with gentle medicines, the use of a light diet, and absolute rest. She recovered, and bore a healthy child, at the full period. We will only add, that this woman, in two subsequent pregnancies, and at or about the seventh month, each time, had a convulsion fit, for which about fifty or sixty ounces of blood were taken from her each time. She was purged gently, and put on a light diet; carried both children to the full time, and was safely delivered. In her fourth pregnancy, at the seventh month, she had another convulsion; but we had then left the town, and Dr. D. was absent. Her case was therefore submitted to another physician. We know not who he was, nor what treatment was used; but she died.

The second case was one of a first labor, at the full time. This woman was low in stature, had broad shoulders, a short, thick neck, large head, dark hair and eyes. This case occurred some fifteen or eighteen years ago; yet, by the aid of notes taken at the time, we can give it correctly. Mrs. —, the patient, lived in the country, about eight miles from Newcastle, Henry county, Kentucky. From her own statement, she was in the latter part of gestation much troubled with headache, had a flushing of the face, and was habitually costive. She consulted Dr. G., the family physician in the foregoing case, and requested him to bleed her. He replied that she should not be bled while pregnant, and ordered her to take some light medicines. She passed on to the end of her gestation, but suffered very much from pain in the head. When she was taken in labor, she sent for a neighboring midwife. Her labor commenced with the ordinary symptoms; her pain continued to increase gradually for two or three hours, during which the pain in her head was not very severe. But she was suddenly attacked with a severe fit. We were immediately sent for; but before our arrival she had eight fits, and was then only partially rational. Her pulse was full, slow, and hard. We examined the state of the os uteri, and found it very rigid, though the dila-

tation was not larger than half a dollar. By this time, one of her eyes was spasmodically affected. A bandage was called for, and preparations made for the purpose of bleeding her. This the midwife instantly opposed, saying that, "Dr. G. had left word that she must not be bled." Without making a reply, we again called for a bandage, when it was brought, together with a half-pint cup, to receive the blood. We opened, at once, a large orifice in the arm, from which the blood flowed freely; perceiving which, we called for a suitable vessel to receive the blood. In an angry tone, the midwife proposed a bucket, and immediately produced a *half bushel pail*. A pint cup was handed to me at the same time. By this time, the fit had come on, and the blood flew around in every direction, over the bed and floor; the most of it, however, was caught in the cup, which was emptied three times before the fit subsided. We then untied the arm, and examined the os uteri, but found no change in it; when another fit came on. Owing to some interruption on the part of the midwife, the patient was violently convulsed before she could be bled the second time. We took from her about two pints more of blood, when the old midwife and a friend of hers again interrupted us, exclaiming that we had killed her. Angered by continued interruptions, we sternly ordered them to attend to their own business, and interrupt us no more. With this, the two old ladies left the room. Her husband stood by all this time, and said not one word. We proceeded to draw blood, till, first and last, we poured five quarts into the pail, besides what was lost. We bled her till she was perfectly tranquil and relaxed, and her pulse very soft and gentle. She was not rational, though she spoke. She slept sweetly, to all appearance, for about two hours. When she awoke, we examined the state of the os uteri, and found it very soft and dilatable; but she had no pain. By some friction on the abdomen with the hand, and by moving the child a little, a slight contraction was excited. After waiting half an hour longer, and no more energy of the uterine fibres being manifested, the ergot was administered; pain was soon excited, and the child born, though it was dead, as we had before predicted. The patient was then put to bed, and a gentle aperient ordered, to act on the bowels; with directions to give cold drinks and cold tea for a diet till the next morning. Fearful, however, lest the nurse should not follow the directions given, we returned about four o'clock in the morning, and found the patient restless, with a pain in her head, and a flushed face.

Suspecting that the nurse had given her stimulants,—hot stews were the order of the day with her, for a woman in childbed,—we immediately took from the patient's arm a pint of blood; but a fit came on, just as the blood began to flow. The nurse denied that she had given anything but what we had ordered; but the patient afterwards told us that she had given her a hot stew that night. Gentle purgatives were ordered, with especial directions to the husband to allow of no variations from the course we prescribed. This was done; and in one month, she was as well as women generally are who have had hard labor; though, perhaps, a little more debilitated.

She became pregnant again, and applied to us for advice. We treated her as before, directing her to keep her bowels open with some gentle pills; to be bled again if she had pain in her head; to use a light diet. etc. When we arrived, at the time of her labor, she had some twitching in her eyes, and her pulse was full; but, being bled two pounds, these symptoms subsided, and she had a speedy and safe delivery. Both mother and child did well. She became pregnant a third time; but, having moved to the neighborhood of the physician she had consulted in her first pregnancy, she concluded to take advice from him again, insisting, however, on being bled. When she was taken in labor, Dr. G. was sent for; but, notwithstanding she had strong symptoms of convulsions, he refused to bleed. Presently, a strong convulsion came on; but he still refused to use the lancet. We were, therefore, sent for, although she now lived twenty miles from our residence. But before we could reach the house, she died in a fit, undelivered.

We have been the more particular in detailing these cases, in order to show the great necessity of blood-letting in convulsions occurring near or during labor. We have had many other cases of the same description, all of which were managed in the same way, that is, by bleeding, as the urgency of the symptoms required: and we have been successful in all. But, should convulsions occur during pregnancy, if the os uteri is well dilated, or is dilatable, and the waters are gathered, the membranes should be ruptured, and the child delivered with the hand or with the forceps. If the midwife cannot deliver by the head, either with the hand or forceps, she should turn the child, and deliver by the feet. After a few bleedings, she will generally be enabled to succeed in one of these ways. But neither of them must be attempted while the patient is in a convulsion. The midwife should always have a lancet in her pocket, and be able to use it in any case of emergency.



## SYNCOPE, OR FAINTING.

Some women are of such a peculiar temperament, that almost any excitement, or pain, especially after it subsides, will cause them to faint; but we never knew a woman to faint during a labor pain, although she may as soon as it goes off. When this disposition is common with the patient, we need not be much alarmed; yet we should watch the symptoms. If blood should be flowing, or slightly oozing from the vagina; if the abdomen enlarge, or the patient becomes weak, we should suspect internal hemorrhage. In that event, if the head is within the pelvis, and can be reached by the forceps, the child should be delivered immediately; but if the head is above the pelvis, and the os uteri is sufficiently dilated, it should be turned, and the delivery accomplished. But should the os uteri be firm, and but little relaxed, it is better to rupture the membranes, if that can be done. The ergot should then be given, to force the contraction of the uterus. If the ergot fail,—which is rarely the case,—use the following medicines:

*Recipe*: Pulv. Opium, six grains.  
Sugar Lead, twenty grains.

Mix in six powders. Give one in sirup, and repeat every half hour, till the flooding ceases. At the same time, give cool drinks, and apply cold cloths to the vulva, back, and abdomen; and, if necessary, fill the vagina with soft cloths, wet in cold water, and let them remain till they arrest the hemorrhage. By some of these remedies the patient may be saved; but the child will generally be lost, under these circumstances, no matter what course of treatment is pursued.

When the child is born, particular attention should be paid to the mother, in order that she may not sink from exhaustion. Support her by wine and cordials, till reaction takes place; when the case may be treated as in other deliveries.

## TEDIOUS LABOR.

The causes of tedious labor are various, as, sudden emotions of the mind, anger, grief, fear, the arrival of a strange midwife or doctor, or violent nervous excitement. Any of these causes may suspend the action of the uterus, at times, for an hour or two, and again for two or three days. There are also other causes assigned, as a general reduction of muscular strength, from a long spell of fever, consumption, etc., or a general emaciation of body, from any cause.

These conditions of the system are dreaded both by patient and friends; but without just foundation. We never saw a patient, reduced by any of the above causes, that did not have a safe and speedy delivery; at least, when all other circumstances were equal. In this state of the system, the muscles are relaxed and diminished in bulk, and the resisting powers are diminished also; but this does not deprive the uterus of its energies; and, consequently, labor is generally speedy and safe.

But there are other causes of tedious labor. They are, *First*, the want of contractile power in the uterine fibres. *Second*, a rigid condition of the soft parts, especially the os uteri. *Third*, cicatrices or scars, or other imperfections arising from injuries done to the parts concerned. *Fourth*, a premature escape of the waters. *Fifth*, over distension of the uterus, producing torpor of that organ.

The first is produced from causes that are not always definable; and it may succeed to some constitutional defects of the uterine fibres. If the os uteri is well relaxed, the ergot will be found to have a good effect.

*Recipe* : Pulv. Ergot, one drachm.  
White Sugar, three drachms.

Mix, and divide into three powders. Give one in water, and repeat every twenty minutes, till the uterus acts sufficiently; for it is the longitudinal fibres that are in fault.

In the second case, where the parts are rigid, and will not yield,—if, at the same time, the contractile force be sufficient,—take some blood from the arm, and enjoin rest of body and tranquillity of mind. Cool drinks, a dose of castor-oil, and not allowing the patient to be handled, will, in the majority of cases, be all that is required. When the os uteri descends below the head of the child in the pelvis, the midwife should gently push it up with the finger, and hold it there while the pain is on. This should be continued till the head of the child escapes from the mouth of the womb, when she may leave it to the efforts of nature. This difficulty occurs, most frequently, when the child is born before the full time, or when the woman is too old or too young at the time she has her first child.

In the third case, where labor becomes tedious from scars or rigidities, produced by the injudicious use of instruments, or otherwise, there are, sometimes, long cords or bridles contracting the vagina. In other cases, dreadful deformities have taken

place from lacerated wounds, or mortifications, till the parts are rendered unfit for their natural use; although even under these circumstances, a woman may become pregnant. But when labor comes on, she suffers all the violent expulsive efforts, without effecting the delivery of the child. Some authors advise, in these cases, the use of the scalpel or bistoury, to divide the hard ridges or scars; but they are not required in one case in a hundred. Keep the patient cool and quiet; the bowels open with some gentle medicine, such as castor-oil, or senna-tea, together with an injection of warm water, and let her keep it as long as she can. If the pulse be full, bleed her in the arm. Then take the following medicine:

*Recipe:* Extract Belladonna, one drachm.  
Hot Water, one pint.

Dissolve the extract in the water, and dip soft cloths into the solution, and keep them constantly applied to the rigid parts, and the whole vulva, for half an hour. If the belladonna cannot be procured, take a quantity of the seeds of gimpson, (Jamestown weed.) or of the leaves of nightshade, of which make a strong decoction, and apply to the parts, as above directed. If the patient has not been bled before, you may now bleed her till she becomes faint; and in a short time these obstacles will give way, and the child will be born without the use of a cutting instrument.

We were once called to attend a patient, who, when a little girl, had a white swelling in the head of the femor (thighbone) of the right side. An abscess formed and broke in the right groin; and the inflammation, ulceration, and sloughing extended to the pelvis and vagina. When the disease was cured, and the parts healed, the vagina was almost obliterated, and the external orifice pointed out in the upper part of the thigh. She, however, grew up and married. She became pregnant; and, at that time, lived about forty miles from our residence. When the time of her confinement drew nigh, she left home, and came to her father's, within five miles of where we lived. We attended her in her labor, and found the vulva in the position above stated; and then learned the history of her case, as above given. The vagina was so small that it would admit my finger with some difficulty. It was rigid and hard, resembling cartilage more than flesh. Her pains were regular, and her abdomen very large for a first child. The vagina pointed at an angle of forty or forty-five degrees from a true line of the axis of the pe vis and superior

strait and, in consequence of this contraction, the os uteri could not be reached with the fingers. Her bowels had been kept freely open, and she had lived on a vegetable diet for some time. We bled her till she became faint, and this produced a sufficient relaxation to let my finger pass into the vagina. The os uteri was found to be relaxed, and in a good condition for the head of the child to pass; and the waters were gathered. We waited an hour or more, ordered an injection, which operated well; but not much was gained, in the progress of the child, owing to the condition of the vagina, although the pains were good. We bled her again till she fainted, and also applied the extract of belladonna, in solution; and in twenty minutes the vagina and vulva yielded sufficiently to let the head of the child advance; the waters broke, and in less than an hour more she was delivered of a very large, full-grown child, still-born. The patient soon recovered; and we delivered her twice, after that, of fine, healthy children.

We are fully of the opinion that, had she not been bled to fainting in the first labor, she never would have been delivered in the natural way. In our practice, we have seen several cases of a similar character, though none so bad, nor from the same cause; and several might be cited from authors who have relieved them in the same way.

In the fourth case, when the waters have escaped a long time, and the contraction of the transverse fibres is so much stronger than that of the longitudinal, that the pains, though hard enough, do not bear down; and, consequently, the os uteri contracts instead of relaxing, the patient must be bled till the system is relaxed; when, if the pains are not sufficiently expulsive, give ten drops of muriatic acid in water, and repeat every ten minutes for a few times. This will generally have the desired effect; but should it fail, and the os uteri remain stationary, then some permanent induration, such as scirrhusity of the neck of the womb, may be suspected. It will then prove to be a difficult case, and require the aid of a surgeon.

Fifth; when labor becomes tedious from an over distension of the uterus, or from too great a quantity of the *liquor amni*, the pains are regular, and sometimes pretty strong, but do not bear down. They may continue for a longer or shorter period, and sometimes may require to be suspended by an opiate; but if no other remedy is used, the patient may become faint, and perhaps die in this situation. When, therefore, the abdomen is

large, and contains a considerable quantity of water, while the os uteri is soft, but not open, and the woman likely to sink, the midwife must rupture the membranes, and let the waters escape. This will give the uterus a chance to contract, and adapt itself to the child. The patient will then feel relieved from her faintness, and the pains will strengthen. But should they not yet be strong enough, bathe the abdomen with strong spirits of camphor or whiskey, and give a cup of strong ginger-tea, which will generally terminate the labor in a short time.

#### OF HERNIA, OR RUPTURE.

If the midwife be called to a lady in labor, who is suffering under hernia, either inguinal or femoral, and the hernia is strangulated, which she may know by examining the tumor, and finding it irreducible, the patient having a frequent inclination to vomit or to faint; the only remedy is, to deliver the child by the forceps, or by turning. The parts must be made to relax, by the use of the lancet, or the extract of belladonna, applied to the os uteri with the finger. As soon as the child is born, she should reduce the hernia, if possible, before the tonic contraction of the womb commences.

#### PARTIAL CONTRACTION OF THE UTERUS.

There are two forms of partial contraction of the fibres of the uterus. *First*, the uterus may contract only at the margin of the os uteri; and, *second*, the contraction may extend to the upper part of the cervix, or neck of the uterus; or it may be confined to the upper part of the neck or womb only. Perhaps this never takes place, except in cases where the waters have been long discharged, and the labor has become tedious and dry.

These cases are considered by some as difficult and troublesome to manage. Some authors recommend turning the child, while others advise the use of instruments. We think either practice hazardous, and not to be resorted to, because we have a safer and more certain remedy. The practice of turning, or of the use of the forceps, would be likely to rupture the uterus at some part of the cervix. In the spasmodically contracted condition of these parts, it would be impossible to introduce either the hand or forceps, without inflicting insupportable pain, even if there were no danger of rupturing the cervix. The correct



and safe practice is this: let the patient, while standing on her feet, be bled from a large orifice in the arm, till she becomes faint. Let her then be laid down, and, on her resuscitation, the stricture, or spasmodic action, will be removed, and the labor will then be speedily over. We have never known this remedy to fail.

## PROLAPSUS, OR FALLING DOWN OF THE CORD.

When we take into consideration the length of the cord, and the case of its descent,—especially as there is nothing to retain it in the uterus after the membranes are ruptured,—we are led to wonder why it does not descend before the head of the child more frequently than it does. This descent does take place, however, in some cases; and when it does, the cord cannot be placed in any situation in which it will not be pressed too tight by the head of the child. In this case something must be done, or the child will be born dead. The midwife must either turn the child, deliver with the forceps, or return the cord into the uterus. It is not possible always to do either the first or the second; consequently, the cord must be returned into the uterus; and this is the way to perform the operation: take a gum-elastic bougie; make a small hole through it, near the point; pass a small thread or piece of ribbon round the cord, about the middle of the depending part; then pass both ends of the ribbon through the hole in the bougie, with a small wire. After this, it must be ascertained on which side of the head of the child the cord has descended; and the bougie, carrying the cord and ribbon with it, must be passed on that side, till it is safely lodged above the brim of the pelvis, and also above the head of the child. The cord must then be released from the hold that kept it pressed tight to the bougie; and, holding that instrument firm, and pressing it up to the highest point, it must be gently turned a little to the right and left, raising it so as to loosen the cord in the hole. The bougie is then gently withdrawn, and the ligature left behind, around the cord; where it should remain till the child is born. This should always be done before the pulsation is stopped in the cord, or the child will die.

## OF EXHAUSTION.

Exhaustion may be relative or positive. Relative exhaustion may arise from too great a quantity of liquor amnia; and when this is the case, the abdomen will be very large, the pains feeble, the os uteri relaxed, and but very little pressure upon it when the pains come on, and the patient will be restless and anxious. This state of things may last for one or two days, and no progress be made in the labor. There is so much water that the uterus cannot act upon the child; it therefore loses its power of contraction. In this case, the membranes must be ruptured, and the waters allowed to escape. If the uterus should not contract, friction should be applied to the abdomen, with the palm of the hand, or a dry cloth; or a flannel, wet with warm spirits, may be applied; and some one of these remedies will always excite uterine contraction. *Second*; the uterus may, from an undue balance of circulation, become weary, or fatigued, and thus lose its power to contract. In this case, the patient is restless, weak, hot, and anxious; and her pulse is hard and irregular. With such symptoms, all stimulants will do harm; though they are often given by the ignorant. The patient must be bled till the pulse becomes soft, when that restless and feverish feeling will be removed, and the patient will soon be delivered. *In the third case*, the patient is not much exhausted; but the pains have gradually died away, till they have nearly, or entirely, ceased. In this case, the os uteri will be relaxed, and the waters gathered. If the presentation is right, the membranes must be ruptured; and if this fail to excite the contractile powers, give a cupful of warm ginger-tea. Should that also fail, give the following mixture:

*Recipe*: Volatile Tincture of Valerian, one ounce  
Tincture of Castor, two drachms.  
Muriatic Acid, thirty drops.

Mix them together, and give a tea spoonful, in water; and repeat every fifteen minutes, till all is taken, if the uterus should not act kindly before. If this should fail, then give the ergot.

*Recipe*: Pulv. Ergot, one drachm.  
White Sugar, three drachms.

Mix in three powders, and give one every twenty minutes, till the uterus acts sufficiently. If we are asked why we do not give the ergot at first, we answer, that, notwithstanding all that authors have said with respect to the innocence of ergot, we

believe it to be a dangerous remedy for the child, especially when injudiciously administered. It should, therefore, be the last thing resorted to for the purpose of exciting uterine contraction in labor. *The fourth case* is, where the whole system becomes exhausted, or very languid. The patient is pale, listless, or haggard in countenance, and disposed to doze, or sleep, with a damp or cold clammy sweat all over her. Under these symptoms, the child's case is generally desperate, and the mother's a bad one. The ergot should be given immediately, according to the foregoing direction; and, if it fails, the child must be delivered by turning, or the forceps, according to the presentation.

#### HEMORRHAGE FROM OTHER PARTS THAN THE UTERUS.

As we have never met with a case of this description, which proceeded to an alarming degree, we shall, for this chapter, principally give an extract from *Dr. Dewees*. The Dr. says: "It sometimes happens, though rarely, that a bleeding of an exhausting kind, as from the stomach, lungs, or bowels, may oblige us to terminate artificially a labor that, otherwise, would have terminated naturally, if such accident had not happened. When a bleeding from any other organ than the uterus accompanies labor, which, if too long continued, would exhaust the patient, we should inquire, *first*, what agency the labor has, either in its production or its continuance; *secondly*, how far immediate delivery would contribute in arresting the hemorrhage. If we are satisfied upon this point, and conclude the only chance for the woman's safety is delivery, we should proceed to it, without further loss of time. If the uterus is dilated, or dilatable, we should turn the child, when the membranes are entire, or have lately given way. If the head be too low to admit of turning, use the forceps. If the waters have been long discharged, and the uterus strongly contracted on the child, you cannot turn it. Then you must select the instrument best adapted to the case."

#### POSITION OF THE WOMAN FOR TURNING THE CHILD, AND THE MANNER OF OPERATING.

The operation of turning the child has often been referred to in this work; and we now come to treat of it specially and particularly.

This is a subject of great importance, in many respects, both to the mother and the child; so much so, indeed, that by it the

safety of the child is always more or less endangered, and the life of the mother sometimes hangs alone upon this slender thread. It is, therefore, in a twofold point of view, of vital importance; and, seeing this is the case, no man or woman should assume this great weight of responsibility, without being first well qualified to discharge all its demands. No midwife can tell at what moment she may be called to perform this duty in her profession; and she must, therefore, be prepared beforehand. Under this view of the subject, we shall be excused for entering into such a description of the operation as will be sufficient, at least, to guide her safely through. And, in doing this, we shall avail ourselves of the assistance of *Dewees*, *Burns*, *Baudeloque*, *Denman*, and others; so far, at least, as we believe they have set forth this subject in its proper light.

When necessity obliges us thus to terminate a labor, the patient should be so placed as to make the operation as easy to her as possible, and, at the same time, to give the least hindrance to the operator. The propriety of this direction is admitted by all. But there is a diversity of opinion as to what that position should be; some recommending the side, some the knees, and others the back; of which positions, we give the preference to the back, inasmuch as it ensures ease to the mother, and convenience and freedom of action to the operator. A mattress, covered with a folded blanket, should be placed so as to reach the edge of the bed, and cover the bed-rail; and two chairs, or stools, must be placed at a proper distance from the bed, to afford support to the patient's feet; and far enough apart for the operator to stand between them. Her knees must be supported by an assistant, sitting on each chair; a cloth of some kind spread on the floor under the patient; and a vessel may be placed there also to receive the fluid that may pass away. The patient must lie horizontally on the mattress, with her feet resting on the chairs, so as to leave her hips free from the bed-rail, or mattress; and be covered from the feet to the chin. So much as regards the patient.

On the part of the operator, the following rules are to be observed. The idea should never be held out that the operation about to be performed is either difficult or hazardous. For the sake of convenience, the operator should take off his coat, and put on a loose gown,—or, if a woman, should roll up her sleeves above the elbows,—and either sit or stand, according to the height of the patient. If he sits, a folded sheet should be thrown over his lap; but if the patient is on a low bed, the operator

should kneel on a pillow. The hand and wrist should be lubricated with lard, or fresh butter, or some other kind of animal oil; which should also be applied to the vulva and the vagina. That hand should be used the back of which will pass next to the uterus; and it should be introduced into the vagina when the pain comes on. It should be placed in a conical form, by putting the fore and little finger together, with the thumb between them, that it may enter, and dilate the vagina the more certainly and gradually. After the hand is in the vagina, it should be passed gently and gradually into the uterus, in the absence of the pain; because there will then be less resistance. It should be held steadily; and when the fingers have passed into the os uteri, they should be gently opened, in every direction, so as to facilitate the expansion of the cervix uteri. This should be done with caution, in order that as little pain as possible may be produced; and if the uterus should contract, the operator must wait till the pain is off. If the hand become cramped, or much fatigued, it should be withdrawn till it recovers.

While reaching for the feet, the other hand of the operator should be placed on the abdomen; and when he has succeeded in gaining them, he should grasp them firmly, and be sure to keep a finger between them, to prevent injury from pressure. He should, if possible, act on both feet at the same time; and though the child may be delivered by one, yet it should never be done but from absolute necessity. If one leg should be higher than the other, he must endeavor to bring them both together before delivery be attempted. In bringing down the feet, they should constantly be conducted so as to make the toes present towards the abdomen of the child; or, in other words, to make them pass, as it were, over its face. This rule is most important, and should never be neglected; for if it be lost sight of, the uterus may be torn, and the child killed by injuring the marrow of the backbone. If only one foot can be brought into the vagina, let that be secured by a fellet, and proceed to search for the other.

No attempt should be made to turn the child during a pain, lest laceration of the uterus should be the result; but after the feet are out, every advantage should be taken of the pain, if any should exist, and the efforts of the operator should coöperate with those of the uterus. The whole act of turning should be considered one of absolute necessity, rather than of choice; and, therefore, when it is proper to attempt it, it is always proper to complete it; not trusting the further delivery, in any stage of the



process, to the efforts of nature, as some have advised. The operation of turning should be performed slowly, and with all possible tenderness; more especially if it be undertaken in the uncontracted uterus, or immediately after the waters have been discharged. This rule should never be violated; as a too sudden or harsh attempt to turn the child, and bring it away, may invert the uterus; or, by emptying it too suddenly, cause a dangerous hemorrhage. Not unfrequently, there is a difficulty experienced in bringing down the breech, after the feet have been brought into the vagina; owing, in part, to the head partially sucking into the superior strait. When this is the case, the head of the child should be raised, while the feet are drawn downwards; and this is to be done by applying the thumb against the forehead of the child, and pressing it upwards; while with the other hand the feet are gently drawn downwards. When only one foot can be seized, care should be taken that it belong to the side over which the hand has passed; otherwise, a severe twist will be given to the body of the child, and probably defeat the attempt to bring it down. The feet should be brought through the external parts in such a manner as to place the toes toward the back of the mother; and, when the legs are delivered as far as the knees, they should be wrapped in a dry cloth, and the thighs taken hold of by the same, and gently drawn downward, till the *nares* are entirely delivered. The hips should then be taken hold of, and the abdomen delivered, till the navel string appears, a loop of which should be drawn down, and allowed to hang out of the vagina, that it may not be injured by being put too much on the stretch. To do this in the best manner, two fingers should be slid along the cord, for two or three inches, and the part of the cord above them should be gently pulled with the upper finger, while that which is next the child should be prevented from being stretched, by gently pulling it toward the umbilicus, with the thumb and lower finger; while, at the same time, the upper finger draws down a portion of the cord, if it be sufficiently loose, by straightening it along the abdomen of the child. If it does not come down, and cannot be made to do so, without using too much force, and there is great danger of its being pressed so as to stop the circulation, it will be better to pass a ligature around it and cut it. When the child is freed from the restraint occasioned by the cord, or, should no restraint exist, and it is delivered beyond the umbilicus, it should be made to pass through the arch of the pubis, with its back pressing either

against the right or left of the pubis, that the head may be made to enter the superior strait obliquely. This must be done by a little turn of the body, if it does not place itself in this position, as we use detraction downwards.

But little difficulty is experienced, up to this period, in delivering the child; but now its progress is interrupted by the armpit approaching the vulva. When we attempt to deliver the arms, the one next the back of the mother should always be undertaken first. By pressing a finger or two upon the point of the child's shoulder, and pulling it firmly downwards towards the breast of the child, it will disengage itself, and fall into the vagina; from which position it is easily delivered, by hooking it forward with the point of the finger. If the child be large, and the pelvis small, the body of the child should be raised up towards the abdomen of the mother, before the delivery of the first arm is attempted. The delivery of the second arm is generally more difficult to accomplish, especially if the head and arm are both engaged in the superior strait at the same time, or if the arm has passed behind the neck of the child. But this difficulty, if properly understood, is easily overcome. When the head and arm are thus situated, the operator must turn the shoulder of that arm to the side of the pelvis fronting the face of the child, and it will be instantly disengaged. It must then be brought down, as directed for the other.

The delivery of the head of the child is the next thing to be attended to. Great care must be taken, in this part of delivery, lest, by an unlucky or ignorant pull by the shoulders, dislocation of the child's neck, and, as an immediate consequence, death, should ensue. Before any attempt is made to deliver the head, its situation must be carefully examined, and its position accurately ascertained. If it be at the superior strait, the face must be at one side; so that the great diameter of the superior strait and that of the child's head should correspond. If it be otherwise situated, it must be placed in this position before delivery is commenced; and this may be done, at any time, by pushing the side of the face with two fingers. When thus adjusted, it will readily descend, if a very gentle force be applied to the body of the child; and this force must always be applied in the direction of the axis of the superior strait. The face of the child must be kept to the back of the mother; and, if it is not already in this position, it must be so placed. This is done by applying a finger or two on the cheek of the child, and pressing it into the desired

location. When thus placed, the great diameter of the head and that of the lower strait will correspond.

The body of the child must now be carefully supported; and this is best accomplished by the operator passing his arm beneath it, while his fore and middle fingers are passed on each side of its neck. This will not only give support, but will afford a fine hold, when detractive force is necessary to deliver the head. When the head is in this situation, it is always without the uterus, and therefore we cannot expect aid at this time from the contraction of this organ.

The patient must now be solicited to employ her voluntary powers to bear down with the abdominal muscles, so that as little force as possible may be used by the operator, on the body of the child. The operator must now raise the body nearly upwards, while he presses with two or three fingers on the back part of the child's head, so as to carry it downwards, and disengage it from behind the pubis, which is of great importance for the safety of the child. A little advantage is sometimes gained by pressing the chin, but never by pulling at it. The object to be gained is, to preserve the chin from hanging in the folds of the vagina, and so facilitate its escape.

It will be readily seen that, in labors of this kind, the child will be in great danger, when there is much delay in the delivery of the head. This risk arises from the severe compression of the body of the child, the pressure on the cord and on the head. The whole, therefore, of this difficult process, must be conducted coolly and deliberately, always endeavoring to coöperate with the efforts of the uterus as directed above. When it is necessary that the uterus should act, the pains must be waited for, though they should be far apart; for, by so doing, the danger which arises from pulling at the child is avoided. But if there be no pains, we must do what we can without them, by giving intervals of rest, and then soliciting the mother to use her voluntary efforts.

A child may be easily killed in turning, by the use of rash means, as delivering the head by reprehensible pulls, by which you will be sure to slip a joint in the neck. We have seen this accident caused by a little carelessness on the part of the midwife in turning the child, and desire to press the importance of a thorough acquaintance with this form of delivery on all our readers. Let no one who is not thus familiar with it, ever, under any circumstances, make the attempt, since extensive injury, or immediate death, may be the result.

## THE LOCKED HEAD, ITS SIGNS, ETC.

When the head of the child has passed some distance into the cavity of the pelvis, and there becomes fixed, and is immovable, except upwards, in the pelvic cavity, it is becoming locked; and when it has become so firmly fixed in the bones of the pelvis that it cannot be moved either up or down, it is said to be locked, or impacted.

There is but one general species of locked head, and that is, when the head is fixed by two points of its surface, diametrically opposite to each other. Of this there are two varieties. *First*, where the head is fixed with its greatest length between the pubis and sacrum; and, *second*, where the thickness of the head cannot pass, owing to the narrowness of the pelvis.

In the first case, it is the front and back part of the head, which are in contact with the bones of the pelvis; in the *second*, it is the parietal protuberances. Of the two forms, the latter is the most rare. When the head is locked, it acquires the form of a wedge; and this condition of the head is finely illustrated by *Lamott*, when he compares it to the keystone of an arch.

Several causes must combine to produce a locked head. *First*, the long-continued and vehement action of the uterus, and the auxiliary powers of labor. The locked head, therefore, is rarely, if ever, found in a delicate woman. *Second*, a disproportion between the pelvis and the head of the child. This may depend upon a wrong position of the head, or its great size or solidity, or upon a deformity of the pelvis.

The immovable condition of the head is a sign that it is locked; but after this, other signs or symptoms arise, which, if they do not characterize this situation, are sure to accompany it; as, a swelling of the skin on the child's head, a swelling or thickening of the os uteri, vagina, vulva, and other parts. Though these symptoms do not prove that the head is locked, yet a locked head is never without them.

The parts of the mother which are so tightly pressed by the head, are liable to inflammation, sloughing, or mortification; and the child is exposed to almost certain death. The whole of the soft parts of the mother become injured by the long and severe pressure of the child's head upon them; and the vagina, rectum and the urethra, sometimes receive an irreparable injury. The bladder also suffers from an accumulation of urine; nor can it be relieved by the catheter, because the pressure of the child's head will not allow that instrument to pass.



When the head is locked, there are but two remedies; one of which is the forceps, and the other the reduction of the child's head by cutting instruments. The latter will never be performed by a conscientious man while the child is alive; and the former only gives a mere chance to save its life. In either case, a skilful operator must be called in, and the rules laid down by the best authorities must be followed in the performance of either of these operations.

#### THE USE OF INSTRUMENTS.

The forceps, vectice, perforators, and hook, as well as several other instruments, are sometimes indispensably necessary in particular cases of labor, and under peculiar conditions both of mother and child. To give a full and complete description of the cases necessary for their use, and the manner of applying them in all the circumstances in which it would be proper to use them, would occupy a small volume; and, as no midwife in this country would be capable of using them, a doctor must necessarily be sent for when the use of instruments is requisite. We shall, therefore, omit that part of practical midwifery.

#### OF THE DIFFERENT ACTIONS OF THE FIBRES OF THE UTERUS, AND THEIR EFFECTS.

We have said, in a previous chapter, that the uterus is composed of two sets of fibres, the longitudinal and the transverse. Their different actions seem to be as follows: the *single contraction* of the *longitudinal fibres*, and their *compound contraction*, or the contraction of both sets of fibres at the same time; the *tonic* and the *simple contractions*; the *spasmodic* and the *alternate* contractions. These several forms of contraction are to be observed by the qualified and experienced accoucheur.

The longitudinal fibres run lengthwise, or up and down, in the womb; and the transverse run around it, or nearly so. The longitudinal contraction is that by which the womb is shortened, from the fundus to its neck, and the effect of it is to force the contents of the womb to its mouth.

The action of the circular fibres, in natural labor, is to keep the womb from spreading abroad, while the longitudinal fibres bear down; but if either of them acts alone the pains do not bear down. If the longitudinal fibres act alone, the womb spreads out and fills the sides too full; and they sometimes draw



the womb up towards the stomach. When the transverse fibres act alone, the pains do not bear down; but the womb draws up towards the centre of the abdomen, and causes it to stand out more prominently than it should. The simple contraction takes place when either the longitudinal or transverse fibres act alone; and the compound, when both sets of fibres act together. This action attends the commencement of all natural and healthy labors. It presses the head of the child down, while the os uteri pinches tightly upon the finger. But when the pain is off, the head of the child rises a little, and the os uteri relaxes.

The tonic contraction takes place after the child is born, expels the placenta, produces after-pains, and brings into action at the same time all the fibres of the uterus. This is the contraction that ultimately brings the uterus back to its original size. If it takes place before the child is born, and it is requisite to turn the child, it will be found impossible to perform that operation.

The spasmodic or alternate contractions of the uterus, are those which are felt at every returning pain; the cause of which is the approximation of the uterine fibres, a compression of the blood-vessels which distribute a large portion of blood to the general system. The blood-vessels, by reason of this contraction, send the blood in every direction through the system. This is facilitated by the abundant anastomoses between the veins of the uterus and those of the placenta. When this contraction is over, the uterus and all its vessels being in a state of relaxation, the blood quickly returns to fill the vacancies produced by the contraction, when it again becomes a sudden stimulus to the fibres, and they contract again. These contractions are called those of labor; and they are more or less powerful, according to the quick return of blood, and the susceptibilities of the fibres of the uterus to that stimulus. When this action is best performed in the last stages of labor, it is chiefly by the longitudinal fibres, which have not only to expel the child, but also to overcome, to a certain degree, the action of the transverse fibres at the same time. The less, therefore, the transverse fibres are exerted in the last stage of labor, the better; and the quicker and easier will be the labor. Where the power of the contraction of the longitudinal and transverse fibres is nearly equal, the labor progresses slowly; but if the transverse fibres act alone, the child does not advance at all; and it is, therefore, necessary that the longitudinal fibres act more forcibly than the transverse.

## FLOODING AFTER THE CHILD IS BORN AND BEFORE THE PLACENTA IS DELIVERED.

A sudden dash of blood from the uterus, after the delivery of the child, is always a source of alarm to the patient ; and frequently so to the young practitioner, and midwife. Flooding, after the birth of the child, before the placenta is delivered, may take place from various causes. *First*, from fatigue of the uterus, succeeding a violent labor ; *second*, from delivering the body of the child too hastily ; and, *third*, from the placenta being partially detached from the surface of the uterus.

In all cases of this kind, there must be a partial separation of the after-birth from the uterus, or there could be no flooding to do any harm. The treatment in the first two cases is as follows: Let the midwife place her hand on the naked abdomen, and she will find the uterus lying flat, and uncontracted, in a state of syncope, or faintness, from fatigue. She must then make with it a quick, circular motion on the abdomen ; and continue this operation till the womb contracts under her hand into a hard ball, and until the uterus draws down into the region of the navel, or lower. When the uterus has contracted freely, a sudden gush of blood, or coagula, will come from the womb ; and this is evidence that the danger is over ; for the womb is now contracting properly. She may now trace the cord, with her finger, to the after-birth, which must be taken away.

If the uterus should not contract after the placenta is removed, let the friction be repeated, as before, till it does contract. A broad, tight bandage should now be applied, and the patient put to bed.

In the third case, when a portion of the placenta is detached from the womb, and that organ will not contract, by the above means, so as to throw it off, the midwife must introduce her hand into the womb in such a way as to detach the adhering portion of the placenta, and bring it all away. *Dr. Dewees* says: "If it appear that it would require considerable force to destroy its connection with the uterus, every attempt to detach it should be instantly desisted from, and only the piece or pieces found loose or not adhering, be removed ; the remaining parts should be trusted to nature." With all due deference to *Dr. Dewees*, we beg leave to differ from him here ; *First*, because a portion of the placenta left in the uterus always exposes the patient to a return of hemorrhage. *Second*, it excites general

fever, and may lead to inflammation of the uterus. *Third*, because it requires some days for it to decay and come away; and, *fourth*, because frequent injections are required, to keep the parts clean. After all we can do, indeed, the putrefying placenta causes an unpleasant smell and discharge, which is not only disagreeable to the patient and her friends, but may assist in exciting that peculiar form of fever, puerperal fever, with great prostration of strength and destruction of vital energy in the patient, which is so apt to prove fatal, especially in warm weather. We have known all these bad effects to follow the leaving of a portion of the placenta to be removed by putrefaction; and we therefore never allow it to be done in any case to which we are called.

The adhering placenta may always be taken away in the following manner. Let the midwife oil the parts, and her own hand, well, and then pass it up, in a favorable position to reach the adhering portion of the placenta with her fingers. This being done, she must gently, cautiously and perseveringly, loosen the whole of the after-birth from the womb, or as much as she can get at once, and then make another effort for the remainder. But it must be borne in mind, that the effort, both of passing the hand and of removing the after-birth, must be made when there is no pain or contraction of the womb; and that the operator must pause when the womb begins to contract, nor proceed again till the contraction is off. It will be found that the contraction of the womb has assisted in removing the placenta. After the greater part of the attachment is removed, she may assist the removal of the remainder, by gently pulling at the cord with one hand, while the other grasps the placenta, and gently brings it down; being very careful, at the same time, not to pull by the placenta till it is entirely loosened, lest the uterus be inverted; and of this there is the greater danger when the after-birth is situated at or near the fundus of the womb.

It must be borne in mind in this, as in all other cases, to *bring the after-birth away very slowly*. If the uterus should not contract afterwards, the midwife should rub the abdomen with her hand till it does contract; or, if it is only partially contracted, grasp it, and the integuments of the abdomen, in her hand or hands, and hold them firmly till the uterus contracts sufficiently. These directions are necessary to be attended to, in order that all the evils of a retained placenta may be avoided.

Much has been said in opposition to this practice, but with

us, theory is of no importance, where contradicted by facts and experience. And we have no doubt that we have been the means of saving many lives by this practice; and we have, also, seen fatal results from leaving the placenta to be removed by putrefaction.

One objection to this practice is, that the attempt is not always successful. The reply to this is, that a failure shows conclusively that the proper course has not been pursued. *Dr. Dewees*, speaking of leaving a portion of the placenta to be thrown off by the efforts of nature, says: "The efforts of nature are not always availing; and the woman dies from the mischief arising from a retained portion of placenta." Let it be taken away, then, and we have no cause from whence this danger may arise.

There is another situation in which the patient may be exposed, from flooding, to death, in a few minutes, and that is, when the labor has been protracted, with feeble pains, and, all at once, the uterus seems to acquire new and vigorous powers of action; the waters suddenly discharge in great quantities, and the child is instantly delivered, the placenta falling down loose in the pelvis. The uterus suddenly loses its energies, after the expulsion of the child, and, falling into a state of torpor, the mouths of a thousand bleeding vessels are exposed, and no contraction of the womb to close them. The blood gushes, in a torrent, from the vagina; the patient presently faints, and is rapidly sinking into the arms of death; her friends are in a state of alarm, and the midwife herself is not less terrified; the patient is abandoned by all, and a call for a doctor is heard aloud all over the house. But, before he can be procured, the patient expires. Now what shall be done in a case of this kind? Let the midwife and mother ponder well the answer we shall give.

The instant this condition of the patient is discovered, the midwife shall place her hand upon the patient's belly, and, as she will feel no lump there,—the uterus being placid or faint, as well as the patient,—wet it with spirits of camphor, and rub the abdomen freely. Let the patient be placed on her back, and hot, dry blankets applied to her feet and legs. While this is going on, a little spirits and water should be given her, and repeated, a little at a time; but the rubbing of the abdomen must not be discontinued for an instant. The uterus will presently begin to round up, in a knot, under her hand; but the friction must be continued, till the womb draws up in a firm, hard knot, when a sudden gush of fluid will pass from it. This, however, is a



certain sign of success, since it proves that the womb has contracted, and thrown off the blood that had already been discharged, and lodged there. The friction with the hand must be continued, till the womb will no longer relax. The patient will presently feel an after-pain.

The spirits and water may now be given less frequently. The patient should lie on her back all the time, and not be allowed to move for an hour or two afterwards; nor should she speak above her breath during the application of the friction. If it can be readily obtained, give ten grains of ergot, in sugar, and repeat, every twenty minutes, till the uterus contracts firmly. If it relaxes, the friction must be repeated till the uterus will not fall again into a state of atony.

This case requires care in the after treatment. The patient should be kept on the lightest kind of diet; as tea, gruel, rice, sago, soft toast, &c., for several days. The bowels may be opened by an injection, or some very gentle purgative.

There is still another case in which flooding may occur after the child is delivered. The fundus and body of the womb may be in a state of torpor, while the cervix, or neck, retains its tonic contraction; that is to say, the circular fibres of the neck of the womb may act forcibly, and shut it up so close that the blood cannot escape; and, consequently, but very little or no discharge will show itself. Presently, the patient becomes faint and pale, her feet cold, and a cold sweat breaks out on her face and body. Her pulse is feeble, and, perhaps, can scarcely be felt. All are alarmed, and no one can tell the reason of this sudden prostration. Its real cause is internal hemorrhage.

By placing the hand on her belly, it will be found to be full and elastic; but when the finger is passed to the mouth of the womb, it will be closed, and the womb itself full of blood. All the remedies in the previous case are now to be used, with this addition: the midwife must introduce her fingers gently into the vagina, and, on reaching the mouth of the womb, pass them in, one or two at a time, and then gently open it, by spreading out her fingers, when the blood with which it was filled will pass away. The friction with the hand on the belly must be constantly maintained, while the midwife passes her hand gently up, till she can grasp the placenta, which will generally be found loose in the womb; but should it be grown fast at any point, it must be loosened. As she makes the effort to bring it away, she should turn her hand about gently in the womb, till it begins



to contract, and bring the placenta down slowly, waiting now and then for a pain, till it is entirely removed.

At this time, the directions in the preceding case must be strictly attended to by the friend who rubs the abdomen, and the midwife must be sure that a permanent contraction of the womb has taken place, before she leaves the patient.

In all cases of flooding that occur after the placenta is removed, the patient may be treated by some one of the above rules, remembering that, if it can be done, the patient should always be delivered in a horizontal position; by which means, much danger by flooding, after the birth of the child, or before or after the delivery of the after-birth, will be avoided.

COMPOUND LABOR, OR LABOR WITH TWINS, TWO OR MORE, OR  
OTHER SUBSTANCES, AS MOLES, ETC.

There are many signs supposed to indicate the carrying of twins; as, a large, broad front, swelled legs and feet, the supposition of feeling two children moving in the womb, clumsiness of the mother, or inability to help herself, even in turning over in the bed, &c. But these and others are uncertain, and but little to be relied on. Indeed, delivery alone can satisfactorily determine whether a particular ease is one of twins or not; and it is useless, therefore, to venture any opinion concerning it.

The labor, in ease of twins, is in general slower than when there is but one child, in consequence of the uterus being more distended, and having less power to act vigorously. But the management is mainly the same; and if the presentation is right, and the labor natural, the delivery will go on well. In twin cases, one child is apt to be born head foremost, and the other breech foremost; but we have seen twins both born head foremost. The ease must be managed according to the rules laid down on the different presentations in labor with one child; and should any untoward symptoms, such as flooding, fainting, &c., occur, the rules laid down in those cases will apply here. When the first child is born, a ligature must be placed on the cord near the child, and one two or three inches from that, next to the mother. Sometimes, in twin cases, one after-birth supplies both children; and there may be danger of too great loss of blood from the mother, if two ligatures are not used. The other child may also suffer loss by it. Again, there may be only one *corion*, with two *amnions*; but there are, generally, two after-

births, and two separate waters. Though this is generally the case, it is always most prudent to tie two ligatures. If the first after-birth does not come away of itself, and cannot be very easily removed, it may remain till the second child is delivered.

After the first child is born, there is sometimes a lapse of twenty, thirty, or forty minutes, before the effort is made by the uterus to throw off the second. Indeed, we have known hours to pass before the second child was born. It will be prudent to let the patient rest a reasonable time; after which, by the use of a little friction with the hand on the abdomen, the pains will probably be excited. After the children are born, more time should be given for the expulsion of the after-births than in ordinary cases, and the midwife must be sure to let the uterus act its full part in throwing them off. Be careful to let them come away slowly, since the patient may be subjected to flooding, if they are hurried away, as a large surface of the inner wall of the uterus has been covered by the placental attachment. Flooding will take place if the uterus does not contract, as the after-births come away; and in such a case, the means to produce contraction, to a safe degree, must be used.

If there are three or four children, instead of two, the midwife must observe the same rules in the delivery of the children and the after-births, as well as for producing contraction of the uterus, as in other cases, except that each rule must be more particularly attended to and observed.

If there is a mole, and one child, as we have seen in several cases, when the after-birth is delivered, the uterus contracts slowly, and the patient floods. In this case, prompt means must be used to make the uterus contract; and if they do not succeed, the mole must be taken away. The existence of a mole, after the placenta is removed, may be pronounced certain, if a lump too large for the uterus alone can be felt. A mole is a fleshy substance, not unlike a piece of lean meat, without any definite shape, and is what is generally called a false conception.

#### AFTER-PAINS.

After-pains are those which are produced by the tonic contraction of the uterus. After the first labor, women are not apt to suffer much from them; but, in every subsequent labor, the pains from tonic contraction, as a general rule, grow harder and harder; and some ladies declare they suffer more by after-pains

than they do in labor. Some after-pains are necessary, to bring the parts back to their proper state and position, and to secure the woman against hæmorrhage.

When they are very severe, they may be relieved by giving the following medicines :

*Recipe* : Laudanum, thirty drops.

Mix the laudanum in a little water, and let the patient drink it. If this should not relieve her in one hour, give half as much more, in the same way. Or, the following preparation may be used instead :

*Recipe* : Pulv. Opium, two grains.  
White Sugar, one drachm.

Divide into four powders, and give one every half hour, till relief is obtained.

There are some after-pains of a peculiar kind, which neither of the above medicines will relieve. They appear to act low down, near the point of the backbone, and are extremely annoying and severe. But the following medicines will give relief :

*Recipe* : Pulv. Camphor, two drachms.  
Gum Arabic, two drachms.  
Water, six ounces.

Mix them well together, and give a table spoonful every hour, till the pains are relieved. This is certainly a good remedy, where the patient is much debilitated. When the contraction is spasmodic, and the pains kept up from that cause, we have often given relief with the following mixture :

*Recipe* : Laudanum, one drachm.  
Tincture Castor, two drachms.  
Comp. Spts. Lavender, two drachms.

Mix. Give a tea spoonful every half hour, till the pains are relieved.

There is a peculiar pain experienced by some women immediately after delivery. It is located immediately at the point of the backbone, and is called an after-pain ; but we are inclined to believe that it is produced by a strain received by this bone from the passage of the child's head over it. It does not occur except in those women who have this bone very long and hard ; and this is sometimes the case when they live to be old before they marry. The remedy for it is large doses of opium, say one grain, — or forty drops of laudanum, — repeated every hour, till the pain subsides.

## THE LOCHEA.

The lochea is the natural discharge that takes place after the placenta is delivered, and proceeds from the mouths of the vessels which connected the fœtal portion of the placenta to the womb. The discharge will be in proportion to the extent of surface of the uterus which this mass had covered, the number and size of the vessels concerned, and the degree of contraction the uterus may exert. It will, therefore, follow that there is no definite quantity to be discharged. Much, also, depends upon the tonic contraction of the uterus.

From what we have said above, we can readily see why the quantity should differ in different individuals, as well as in the same individual at different times. The use of this discharge is to relieve the uterine vessels from their engorgements, when there is no further use for their action to supply the child. They then pour out their fluid into the uterus, till, by the contraction of that organ, their mouths are closed; when the uterus assumes, in a short time, its former size and position. Those women who have the right kind and quantity of after-pains will be most easily delivered from this discharge.

It may be stopped before the uterine vessels are properly relieved, or the uterus sufficiently contracted; and this effect may be produced by exposure to cold, a sudden check of perspiration, fear, grief, fatigue, or passion. When it is checked by any of these causes, the uterus will become sore and a little swelled, with more or less pain; but it may be relaxed by taking a tea made of virvina root, as follows: take half a tea cupful—made strong, and a little warm,—every half hour; and as soon as the discharge makes its appearance, stop taking that tea, and take a gentle purge.

*Recipe:* Pulv. Aloes, ten grains.  
Pulv. Rhubarb, ten grains.  
Scammony, ten grains.  
Castile Soap, five grains.

Form six pills. Take three; wait three hours, and take the remainder. Gruel, or toast-water, will aid their operation.

If the patient is bilious, or has much pain in her head, she may take the following medicine:

*Recipe:* Calomel, twelve grains.  
Rhubarb, twelve grains.

Form six pills. Take four; wait three hours, when, if they should not operate, the other two must be taken.

The lochea sometimes occurs in excess, so as to weaken the patient. To relieve this, open the bowels with some gentle medicine, such as,

*Recipe:* Pulv. Rhubarb, twelve grains.  
Scammony, twenty grains.  
Castile Soap, ten grains.

Form eight pills. Give two every two hours, till they operate freely. Should the discharge not be checked sufficiently, give the following medicine:

*Recipe:* Sugar Lead, twenty grains.  
Pulv. Opium, two grains.

Mix, and divide into four powders, of which one may be taken every two hours, in sugar and water. After the discharge is checked, the bowels must be opened with a dose of castor-oil.

The locheal discharge sometimes continues to be too free, in consequence of debility; and, in this case, the patient should take some strengthening medicine, such as,

*Recipe:* Huxham's Tincture, two ounces.

Of which a tea spoonful may be taken three or four times a day, in a little sweetened water; or, if she is in the country, where the above medicine cannot be obtained, she may take the following:

*Recipe:* Yellow Poplar Bark, one ounce.  
Red Dogwood Bark, one ounce.  
Columbo Root, one ounce.

Make them all fine, and add to them, in a bottle, a pint of good whiskey, and one pint of water; shake the bottle every day for three days, and take a table spoonful three times a day, in water. A more generous diet may now be taken, and the bowels opened with a pill made of,

*Recipe:* Rhubarb, twenty grains.  
Castile Soap, twenty grains.

Form ten pills, of which four or five must be taken every night, at bedtime.

If the weather is warm, the patient should lie on a mattress: and if the discharge is offensive, she should use a wash of charcoal water, prepared by putting a few lumps of charcoal into a pitcher, and pouring boiling water over them. When cool, the water may be used as a wash for the vagina, with a womb syringe, repeating the application three times a day. If the patient is very weak, she may take the following medicine:

*Recipe:* Tincture of Iron, half ounce.



Ten or fifteen drops, three times a day, in water, will be sufficient; or take,

*Recipe* : Sulphate Quinine, ten grains.  
Elixir Vitriol, thirty drops.  
Water, one ounce.

Mix them, and take a tea spoonful three times a day, in water. If the above purgative medicine cannot be obtained, either rhubarb, senna, Rochelle salts, magnesia, or castor-oil will answer.

The whole management of the mother may be summed up in a few words. Keep the bowels open, and the person comfortably warm or cool, according to the season; use a light diet; let the room be sufficiently ventilated, that is, let the air pass freely through it, occasionally; talk but little; avoid taking exercise too soon; and wear the bandage for a month; and you will rarely fail to have a safe recovery.

## PART IV.

### BLOODY INFILTRATION OF THE LABIA PUDENDI.

OF all the accidents which occur to the parts concerned in labor, none, perhaps, is more alarming, and of more difficult treatment, than the *bloody infiltration of the labia pudendi*. This is produced by the sudden bursting of a blood-vessel in the neighboring parts, most probably in the vagina. When it takes place,—which, fortunately, is very seldom,—it is just before, or immediately after, the birth of the child, or while the head is passing through the pelvis. In thirty years' practice, we have seen but one case; and in that,—the patient refusing to submit to an examination of the parts,—we could only judge from feeling them; and seeing her but once, little or nothing could be done for her relief; so that we have nothing to say on this subject from experience; and, therefore, can only give what others have said concerning it.

It is said by authors on midwifery, that generally one side only is affected; but *Baudeloque* gives a case from *Solayres*, in which both labia were equally involved. Doctors *Maitland* and *Perseil* say the swelling occurred, to their knowledge, before the child was born. This swelling is taken sometimes for the protruding membranes, and sometimes for the head of the child.

According to a majority of authors, it comes on suddenly; but *Dr. Burns* says he knew a case in which two days had passed before the swelling reached its height. The appearance of this swelling is a dark livid, or almost black color. When it is situated on one side, which is generally the case, it presses so hard against the other, that it turns, as it were, inside out, and the passage of the urine is obstructed. This swelling gives great pain to the patient. Sometimes it bursts, as in *Dr. Dewees'* first case, when large quantities of blood and coagula are discharged; and when the discharge takes place, the pain in a great measure subsides.

TREATMENT.—As the parts are sure to slough, and a large cicatrix to be formed in consequence of it, it is best, according to good authority, to open the tumor immediately, by a free incision. This should be done through the inner surface of the labia, whence large quantities of blood will flow out. The patient should be kept in a horizontal position. The urine will be likely to flow; but if it does not, it must be drawn with a catheter. The parts should then be dressed with a charcoal poultice, made of equal parts of wheat bran and charcoal, and covered with a piece of thin muslin, so that no part of it may adhere to the wound. The parts should be dressed frequently, and the coagulated blood removed by the finger.

There is generally an intolerable fetor attending this discharge; in consequence of which, the sore should be carefully cleansed, frequently, with castile soap and water. The *pyroligneous acid*, or the *chloride of soda*, may be sprinkled over the poultice, to aid in removing the fetor. The patient should not be allowed to rise till all danger of bleeding is over, and a bedpan should be used for the purpose of receiving the fæces and urine. If she cannot make water, by reason of the greatness of the tumor, it must be raised up, or turned to one side, and by this means the difficulty will be removed.

There is always great irritation of the system, and much fever, which must be kept under by cooling purgatives, a low diet, and absolute rest:

*Recipe:* Calomel, ten grains.  
Rhubarb, twenty grains.  
Tartar Emetic, one grain.

Form six pills. Give two, and repeat every two hours, till they operate well. Or,

*Recipe* : Scammony, twenty grains.  
 Rhubarb, twenty grains.  
 Aloes Socot., twenty grains.  
 Blue Mass, twenty grains.

Form twenty pills. Keep the bowels open with these pills; at the same time, the patient may take :

*Recipe* : Cream Tartar, one drachm.  
 Salts Nitre, twenty grains.  
 Tartar Emetic, one grain.

Mix in six powders, one of which may be given every hour, in balm or hyssop tea, to keep down fever. If the patient cannot sleep, an anodyne may be given :

*Recipe* : Pulv. Opii, two grains.  
 Ipecac., four grains.

Mix in six powders, and give one every hour, till she can rest. It generally takes from four to six weeks to cure this affection. When the patient is freed from fever, and the wound secretes a healthy pus, even if it is not healthy, she may take some tonic to strengthen her, such as :

*Recipe* : Pulv. Colombo, half ounce.  
 Rad. Gentian, half ounce.  
 Orange Peel, half ounce.  
 Carbonate Iron, one ounce.

Mix, and add to them a quart of good wine. A table spoonful may be given three times a day; in addition to which, a little good wine and water may be taken occasionally, through the day. A more generous diet may be given, or the following tonic may be used :

*Recipe* : Sulphate Quinine, twenty grains.  
 Sulphuric Acid, six drops.  
 Water, one ounce.

Mix, and give forty or fifty drops, three times a day, in water.

As soon as she is able, the patient may take exercise in a carriage, in the open air; but much care and attention are necessary to effect a perfect cure.

#### MILK FEVER, AND\* ABSCESS IN THE BREAST.

Females are more disposed to fever, after parturition, than in any other condition. The various circumstances of gestation and labor, so well calculated to produce not only a predisposition to, but absolutely to excite fever, leave the patient but little chance to escape this evil, unless much care be taken to guard against all exciting causes. But, unfortunately, the common practice of

nursing is the very reverse of what is dictated by reason; and hence the frequent occurrence of fever in these cases.

It is by no means necessary, as some suppose, for the patient to have fever, in order that the milk may be secreted; and hence it is not necessary that she should have milk fever at all. Bad management before and after the child is born, is the only reason why that disease is experienced at all. And, by observing the following rules, both milk fever and sore breasts may be avoided.

In the first place, let the rules laid down in a previous chapter, on preparing a woman for delivery, be observed for two months before confinement; and, during confinement, abstain from stimulating food, hot drinks, and anything that will heat the blood; but, on the contrary, take cool drinks, such as plain water, cool toast-water, or balm tea, cold; and, after delivery, take every night, for three or four nights, a gentle purge, so as to produce two operations the next day. For this she may use the following pill:

*Recipe:* Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap,— of each twenty grains.  
Tartar Emetic, two grains.

Form twenty-four pills, and take three or four of them, every night, at bedtime, so as to produce two or three operations the next day. The patient's room should be well ventilated, in warm weather; but she must not be exposed to the current of air. Let the child be early and frequently applied to the breasts, and thus milk fever may be avoided in almost every instance. But should these rules be neglected, the patient may have fever, and the breasts may be greatly distended and become very painful, and inflammation may be so excited as to terminate in suppuration.

It must be acknowledged, however, that milk fever is not the only cause of inflammation in the breasts. There is a peculiar liability to it for fifteen or twenty days, and the causes may be obvious, or they may be obscure.

Among the obvious causes are blows, bruises, colds, and bad nipples, produced by the reprehensible practice of wearing tight corsets. No girl, who has indulged in this habit for a long time, should ever be a mother,—for more reasons than that of spoiling her nipples.

Neglecting to have the milk discharged in due time, may be

regarded as another obvious cause of sore breasts. But, at other times, the breasts swell and inflame, without our being able to detect any cause, except that the system is not in a good state. Some females are more liable to this affection than others, and sometimes experience a repetition of it with almost every child.

Sometimes this inflammation is announced by a chill, soon after which, the breast begins to swell, and a lump is observed in it, which is sore to the touch. At other times, no lump can be felt, but still the breast is tender to the touch. The reason of this difference is, that sometimes the inflammation attacks the *gland*, and the lump is then produced. But at other times it attacks the *cellular substance*, and then there is only a general soreness through the breast. The fever is always in proportion to the violence of the inflammation, and its seat.

Inflammation of the breast, if not early arrested, will terminate in suppuration; so that much depends upon the early application of proper remedies. Time is often lost by the interference of the nurse, or other attendants, who try to put it back, in order to avoid the blame that must otherwise be attached to them. The patient, also, through a false delicacy, will sometimes neglect to inform the physician of her true situation, till the disease is fully formed. And in these cases we generally find that some infallible remedy, prescribed by some old lady, has been resorted to, and the disease trifled with, until it has assumed a serious aspect.

The patient must observe the following directions :

If she have fever, she must be bled. Warm vinegar, by means of a soft cloth, may be applied to the breasts, and repeated as often as the cloth becomes dry or heated. Let this be kept up, perseveringly, for twenty-four or thirty-six hours, and let the breasts be well drawn, by the aid either of an attendant or a breast-pump. A young puppy draws very easily. Leeches may be applied half an inch below the rounded portion of the breast, and allowed to draw freely. The bites may be kept bleeding, by applying warm water to them. They should be dressed with dry cotton and simple cerate, or hog's lard. Let these remedies be continued till the breast is relieved from deep-seated inflammation; otherwise, it will certainly rise and break. Instead of the poultice, the following liniment should be used :

*Recipe :* Olive Oil, two ounces.  
Sugar Lead Water, one ounce.  
Ether Vitriol, two drachms.  
Laudanum, one drachm.



Mix them all well together, and anoint the breast with it frequently. The following mixture will do as well :

*Recipe :* Sugar Lead, one drachm.  
Vinegar, two ounces.  
Spirits Wine, one ounce.  
Boiled Water, five ounces.

Mix them well, and apply the mixture frequently to the breasts by means of a piece of linen. The patient's bowels should be kept open by,

*Recipe :* Rochelle Salts, one ounce,

dissolved in cold water, and taken for a dose ; or,

*Recipe :* Senna Leaves, half ounce.  
Manna Flake, half ounce.

Boil to a strong tea in a pint of water, and take a wineglassful every hour, till it operates freely. One or the other of these medicines should be taken daily. Her diet should be of the lightest kind ; such as gruel, toast-water, weak coffee, tea, milk and water, dry toast, runnet whey, tapioca, thin sago, arrowroot, roasted apples, and ripe fruits of the season. Her drink must be toast-water, apple-water, molasses and water, &c.

The patient should remain in bed, and lie on her back to prevent, as much as possible, a flow of blood to her breasts. Should they, however, rise, and require to be lanced, this operation should not extend beyond the smallest puncture that can be made. If there be much matter, it should not all be allowed to flow out at once, but the orifice should be closed with lint, and, after four or five hours, this should be removed and the matter allowed to flow again. If there is no pain after the operation, the puncture may be dressed with simple cerate, or a plaster of hog's lard and beeswax. But should there be pain, a bread poultice should be applied over the breast. Sometimes a plug of cellular substance, like fat, stops the orifice and prevents the flow of pus. This must be pulled out with a piece of cloth between the finger and thumb ; but should this produce pain, it may be clipped off with a pair of sharp scissors, and the portion left in be pushed back. This will afterwards be expelled by a natural process. Some lint should be kept in the hole till it heals from the bottom. A hard lump is sometimes left in the breast after the discharge ceases ; and in this event, the breasts must be bathed with warm vinegar, or rubbed with opodeldoc. If the weather is cold, a piece of soft fur should be applied over the breast, and, in the summer, soft flannel or silk. This lump will

eventually disappear and though some females fear that it will turn to a cancer, there need be no apprehension of that, inasmuch as it is nothing but coagulable lymph, and will finally all be absorbed. The following ointment may, however, be applied to it :

*Recipe* : Blue Ointment, one ounce.  
Pulv. Camphor, one drachm.

Mix well. Rub the breast with this, night and morning.

#### SORE NIPPLES.

The nipples may become sore from various causes. With some women this affection is just as certain as the approach of the period of suckling. It is often a species of thrush.

The nipple first cracks, looks dry and feverish, and bleeds when the child sucks. The skin, at times, becomes so brittle between these little cracks or fissures, that the child by sucking draws it off, and thus makes a large raw surface, when the act of nursing becomes almost insupportable to the mother. The child may communicate the thrush to the nipple, as well as the nipple to the child; but it is to be remarked that every sore nipple is not the thrush.

Some of the worst kinds of this disease are produced by an unnatural and wrong application of the tongue to the nipple. Children and grown persons are made to draw the breasts when the milk first begins to flow, and before the child can be made to suck. The nurse, or any other person who may draw the breasts, should first produce a vacuum in the mouth, lay the tongue loosely and easily around the nipple, and suck it as she would an orange, or any other substance from which she wished to extract the juice. By any other mode, the nipple will be made to crack near the breast; and if the same nurse is allowed to continue, she will, in all probability, in a few days, take off one half or the whole of the nipple. But if this should not be done, it would seem that, in many instances, the saliva is poisonous to the patient's breast, and produces a condition in the sore that is hard to remove.

The practice of wearing tight corsets, and pressing the nipples into the breasts, thereby preventing them from growing out, is another fruitful cause of sore nipples. The ligaments which bind the nipple to the breast become hard and less elastic by this most unhealthy and suicidal practice. When the period of lactation comes on, and there is a demand by nature for the nipples to

spring out, in consequence of this injurious habit they cannot be brought out but at the expense of great suffering to the patient. The milk vessels fill, and distend the breasts over the little depressed nipple, till nothing but a flat surface can be seen. The patient must then submit to an abscess of the breast, or go through all the torments of scattering the inflammation, if, indeed, it can be done at all. She is, moreover, liable, with such nipples, to lose the use of the breast entirely; and, of course, when they are lost, she is no longer fit to be a mother.

**TREATMENT.**—In the first instance, where thrush is the cause of the sore on the nipples, the following wash should be used :

*Recipe :* Pulv. Borax, one drachm.  
Tincture Myrrh, half ounce.  
Honey, one spoonful.  
Strong Sage Tea, one gill.

Mix all well together by simmering over the fire; and wash the nipple with it frequently through the day, especially after every time the child nurses. The child's mouth must also be washed with the same.

When any portion of the nipple is gone, or the end is sore, a cup of beeswax should be made to cover it all over, and be constantly worn over the nipple. The dress should not touch the nipple. If this should fail, the following wash may be used :

*Recipe :* White Vitriol, two grains.  
Rain Water, one ounce.

Dissolve the vitriol in the water, and wash the sores with it, three or four times a day. When the cracks are around the base of the nipple, they will be found very hard to heal, but an excellent remedy in this case, when they have been of long standing, is an ointment made of

*Recipe :* Red Precipitate, two grains;  
Fresh Butter, two drachms,

or a piece as large as a common thimble; mix them well together, and apply it to the sores. This, however, must be cleansed off before the child sucks, and reëplied as soon as it has done. We have known old leather, such as a shoe sole, burnt to a cinder, and powdered fine, and dusted in these cracks, to heal them, when other remedies have failed.

In these cases, where the nipples are very sore and difficult to heal, the breasts may be drawn by a young puppy, as its tongue is broad and thin, and it draws easier than a child.

It is more difficult to cure sore nipples than any other sore of

the same size, because there are so many applications of the mouth made to them, and thus they are wet with the saliva, and exposed to the air.

While on this subject, we will say a word on hardening the nipples. This should be done before the child is born, beginning a month beforehand, and using the following wash :

*Recipe :* Tinct. Myrrh, one drachm.  
Rose Water, one ounce.  
Pulv. Borax, thirty grains.

Mix them well together, and wash the parts, two or three times a day, with it; or use brandy, with alum dissolved in it. If these directions are carefully attended to, sore nipples may well be avoided.

#### INFLAMMATION AND ADHESION OF THE VAGINA.

Inflammation of the vagina is of more frequent occurrence than is generally supposed. But it seldom terminates in inflammation of its walls; though this does sometimes occur.

The most common causes of this disease are, neglect after child-bearing, and abortion, or erysipelas in these parts. When a female is neglected, after a severe labor, and the secretions suffered to remain in the vagina, if she should be attacked with fever, adhesive inflammation of these parts may take place. This adhesion may be partial or complete; the patient herself being unconscious of the fact till she recovers; when she perceives, for the first time, that the vagina is perfectly closed.

**TREATMENT.**—Whether it occurs from violence done to the parts, by severe labor, abortion, erysipelas, or by neglect, or otherwise, it becomes very necessary to give it prompt attention. On the first intimation of inflammation, which may be known by great tenderness and soreness of the parts, they should be immediately examined, and washed and cleansed with warm milk and water. If there is fever, and the pulse will admit of the use of the lancet, the patient should be bled from the arm. Cooling purgatives should be administered :

*Recipe :* Scammony,  
Pulv. Rhubarb,  
Aloes Socot., — of each twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Give two, and repeat one every two hours, till they operate freely. The same may be repeated the next day, or the following medicine may be used instead :

*Recipe :* Rochelle Salts, one ounce.

Dissolved in a glass of water; or,

*Recipe*: Senna Leaves, half ounce.  
Epsom Salts, half ounce.  
Manna Flake, half ounce.

Boil, in a pint of water, down to half a pint; and give half a small tea cupful every hour, till it operates freely.

During this time, the vagina should be washed out with warm milk and water, and then with :

*Recipe*: Sugar of Lead, one drachm.  
Rain Water, one pint.

Dissolve the lead in the water, and inject it into the vagina. This should be repeated three times a day. After the use of the lead water, an injection of thick, slippery-elm or marsh-mallow tea may be given. The diet of the patient should be of the lightest kind.

Children are sometimes attacked with erysipelas in these parts; and even grown girls are not exempt from it. But, from neglect, or a false delicacy in not attending to the case, or not making it known, adhesion of the vagina may take place. When erysipelas attacks these parts, mothers should be very careful to keep them clean and cool, and see that adhesion does not take place. By neglecting this matter, the most serious consequences may ensue. The menses will be ever after retained, till an operation is performed to open the passage and let them escape. The books give us many cases, in which life has been saved only by subjecting the patient to this operation; and many cases have terminated fatally, because the matter has been kept secret till all possibility of saving life, by an operation, or any other human agency, was passed. These things are the result of neglect in the nurse, in the first instance; and in the mother, or the girl, in the second; when timely attention would have removed all danger. Let all persons interested, then, take warning, when they read this chapter, and see that these consequences are avoided, in all cases that may come under their care.

#### PUERPERAL, OR CHILD-BED FEVER.

Puerperal fever consists of an inflammation of the peritoneum, or lining of the abdomen, the outer surface of the intestines, the fat of the bowels, the ligaments of the uterus, &c. Any portion of this membrane, or all the contents of the abdomen, may be the seat of this inflammation; even the pleura and lungs have



been found inflamed; and M. Tonnelli says: "the whole uterine system may be involved, even the vessels of these parts."

When this fever attacks the lying-in woman, it generally makes its appearance a few days after her confinement, and is usually ushered in by a chill. The pulse is quicker than in the onset of any other form of fever. The abdomen swells more or less in a short time, and is generally very sore. The milk is not secreted; or, if it is, it dries up. The locheal discharge either diminishes very much, or dries up altogether, and the bowels become constipated. The patient is not delirious, as in inflammation of the womb, though she forgets her child and pays no attention to it whatever.

The fatal character of this fever is proverbial. *Dr. Denman* declares it is the cause of the death of much the greatest proportion of women that die in child-bed, and many other physicians bear testimony to this fact. *Dr. Clark* says that three out of four of those who have this fever die of its effects; and *Dr Dewees* makes a similar remark. But this is to be understood as comprehending all the diseases to which lying-in women are liable; for every disease that was attended with pain in this condition of the patient was called puerperal, or child-bed fever. But now, only that form of fever, in child-bed, which is attended with inflammation of the peritoneum, is called by this name.

The history of this disease would be interesting to the young practitioner of medicine; but as this work is intended for mothers and midwives only, we shall say no more concerning it, than that it has always been more prevalent in Europe than in America; it has prevailed, as an epidemic, in some parts of this country, though this is not often the case. Many writers have noticed it at great length; and among these are Drs. Leake, Key, Denman, Clark, Conquest, Tonnelli, Hume, Armstrong, Gordon, Kirkland, Dewees, &c. Great diversity of opinion exists among them as to its cause; and many of them have not even concluded what the predisposing cause is. It has been attributed to cold, moisture, hard labor, &c. But it has prevailed in places where neither cold nor moisture could have produced it; and it is agreed by the best writers that hard labor is not sufficient to produce it.

To sum up the experience of the host of writers on puerperal fever,—it would appear that all that is required to excite this disease into action is the emptying of the uterus; and even this is not always necessary, if we may believe some writers; for

cases are on record in which this fever made its appearance before the child was born. Nor does it appear that any unusual difficulty in delivering the after-birth has anything to do with its production. Nor will the suppression of the lochea produce it, inasmuch as the disease is the *cause* of that suppression. *Dr. Dewees* says, "It has more frequently occurred, in his practice, after easy, than difficult, labors, or after preternatural labors." And *Dr. Denman* says, "Women are certainly not so liable to be attacked with this disease after difficult labors." If this were the case, it would be constantly prevailing; for the ladies of our country have their share of children, and they are of full size, and have well proportioned heads.

After all that can be collected together on this subject, from books and from observation, it would be difficult to say what is the exciting cause of this disease. Perhaps we shall come as near the truth as it is possible for us to do, if we say, that anything that will tend to produce inflammation in the serous membranes may excite this disease into action; and exposure to damp or cold, a restless disposition, fretting, unsuitable and indigestible diet, a suppression of urine, &c., will certainly do this. Inflammation of the uterus may be communicated to the peritoneum.

We will now rehearse the symptoms and period of attack, and endeavor to make them so plain that they cannot be misunderstood.

The time of attack, after delivery, is uncertain. The disease may be formed before delivery, or at any intermediate period for several weeks afterwards. The sooner after delivery the patient is attacked, the greater will be the danger. The most usual time of its approach is on the third or fourth day after delivery. The patient is seized with a fit of shivering, from the violence and duration of which we may generally estimate the danger of the disease which is to follow. In some cases, however, the chill is so slight,—if indeed there is any at all,—that it can scarcely be discovered. Nor is every chill that a female has in child-bed followed by puerperal fever. Before the shivering fit comes on, the patient is much debilitated, and suffers from pain in the abdomen. This pain soon becomes fixed in the hypogastric region, where a swelling, with fulness and extreme tenderness, ensues. As the disease progresses, the whole abdomen enlarges; so much so, at times, as to attain nearly its size before delivery. The patient is generally sensible of this, and can describe its

progress. She feels great pain in the back and hips, and sometimes in one or both legs, and other parts which are affected in uterine complaints. It is with difficulty that she lies in any other position than on her back, or on one side, with her body bent forward.

If the disease be confined to the uterus, the seat of the pain seems to be changed when she alters her position. She either vomits a green or yellow bitter matter, or has a loathing of everything that is presented to her in the form of food, and suffers much from an offensive taste in the mouth. A sudden change takes place in the quantity and quality of the lochea, and sometimes it is suppressed entirely. If the milk has not been secreted, that process will not now go on; and if it has, it will suddenly diminish, and its taste be perceptibly altered. The urine is voided with pain, in small quantities, and is thick. A frequent desire to stool is experienced; the tongue becomes dry, is generally brown, and sometimes, but very rarely, it is moist, and coated with a thick, brown, fur-like substance.

As the disease advances, its appearance changes. In some rare and slight cases, there is but little change on the tongue. The patient immediately apprehends the greatest danger, and expresses herself with great anxiety, while her countenance bears strong marks both of bodily and mental suffering.

The progress of this disease is sometimes very rapid, especially in hot climates, and instances have occurred in which the patient died in twenty-four hours after the first attack. She does not always grow warm after the attack of the chill, and when this is the case, is apt to die in a convulsion. In some instances, death has taken place quite unexpectedly, either from inattention or from the insidious progress of the disease, the symptoms not having been—in appearance at least—at all in proportion to the danger.

Most commonly, the shivering fit is succeeded by heat, thirst, etc., as in other forms of fever. But here we may draw the distinction between them by the presence of the pain in the abdomen. All the symptoms do not appear in every patient; but they may all be found accompanying the disease in its various forms.

There is much variation in the subsequent stages. The signs of inflammation, joined with extreme irritability, continue for a few days, when those of putridity appear,—sooner in this, per-

haps, than in any other disease which is truly of an inflammatory character. A brown adhesive sordes collects about the teeth, and all kinds of food and drink are rejected, except those of a cool or acid character. Hiccough comes on, and distresses the patient very much, by agitating the abdomen; and small, livid specks often appear on the abdomen or privy parts. The bowels are now very much disturbed, and in some cases a looseness comes on immediately; nor can it be corrected but with the greatest difficulty, till the disease is overcome, if indeed it can be arrested at all. The stool presently comes away involuntarily, and it is always preceded by an increase of pain, though after the evacuation a little relief is gained. The stools are uncommonly fetid, of a dark green color, and work like yeast. In the last stages of the disease, though there has been much purging, hard lumps will sometimes pass away, bearing the appearance of having been retained in the bowels from before delivery. At times, a dusky tumor, about the size of a shilling, or larger, appears on the knuckles, wrists, elbows, knees or ankles. This may be regarded as an indication of great danger.

When the disease runs its course without medical aid, and sometimes with the best that can be procured, it ends in death, with all the symptoms of violent inflammation, terminating in gangrene, or suppuration. When the symptoms above stated are of an aggravated character, we may generally look for a fatal termination of the disease.

We are often asked whether this disease is contagious. Whatever it may be in other countries, we may answer promptly for our own, and say, *it is not*, under any circumstances whatever. No one, therefore, need fear it on this account.

TREATMENT.—*First.* From what we have said on the nature and symptoms of this disease, it will readily be perceived that we believe puerperal fever to be a disease of a highly inflammatory character; and as bleeding is one of the most efficient measures, — and, indeed, almost the only one, if one alone would be sufficient to remove the inflammation, — we should not hesitate to use the lancet freely, more especially when the inflammation is located in the peritoneum.

When we say we recommend the use of the lancet, we mean that it is indispensable; as, without its free use, but few, if any, ever recover from this alarming and fearful disease. The patient, then, should be bled in its early stage. As soon as the chill ceases, and the skin becomes hot, the pulse quick and hard the



belly being tender to the touch, — though it is not always equally tender over its entire surface, but sore and painful on pressure, — when this is the case, we say, bleed from a large orifice in the arm. The blood should be permitted to flow until the pulse becomes soft and beats less frequently, the heat abates, and the skin becomes moist. The operator must not be governed by the *quantity* of blood taken, but by the *effect* produced; and it generally requires from a pint and a half to three pints to produce the desired result. If the patient becomes faint, the blood, of course, must be stopped; and it will be found that all the symptoms abate with the faintness of the patient. But if the disease is not arrested in its progress, when the reaction takes place, the fever, pain, and soreness of the abdomen will return. In this event, the patient must be bled again; and, perhaps, the operation may require to be several times repeated. But should the pulse not become strong enough to admit the use of the lancet again, cups, or leeches, should be applied to the most tender parts of the abdomen. The quantity of blood drawn here should always be in proportion to the strength of the patient.

Care must be taken by the midwife, in this disease, that she is not alarmed by symptoms of debility, when they are only symptoms of the violence of the disease. If they require it, the bleeding may be repeated two, three, or four times, in thirty-six hours, but not always with the lancet. As long as the abdomen does not swell much, and the pulse is under a hundred and thirty beats in a minute, blood may be drawn, either from the arm, or by leeches, or cups.

The great importance of the use of the lancet in the cure of this disease, is the reason why we insist so strongly upon it. Let it be remembered, that puerperal fever cannot be cured without bleeding freely; and let the midwife be sure to take the blood from a large orifice. The next remedy to be used is purgatives. Very much has been said on this subject, and purgatives have been alternately advised and rejected, by those who have written on this disease. When we compare our experience with that of others, — it has been limited, to be sure, in comparison with that of those who have had the charge of large lying-in hospitals, we are candidly of the opinion that purging, in a proper way, is indispensably necessary in the cure of this disease. But we should be careful as to the medicines employed; and, as there is no article that will prove as beneficial for the patient as calomel, the following pills may be taken with advantage:



*Recipe* : Calomel, sixty grains.  
 Rhubarb, ten grains.  
 Water, a few drops.

Form ten pills. Give five at first, and one every two hours, till they operate freely. When the operations are thick, and of a bottle-green color, it may be regarded as proof that the medicine is doing its office well; and if the patient is salivated a little, it will only aid in the cure. At the same time, the abdomen may be rubbed with:

*Recipe* : Mercurial Ointment, one ounce.

Rub in one half of this, every two hours, all over the abdomen.

The drink should be, slippery-elm tea, or gum-Arabic water, or marsh-mallow tea, &c. Arrow-root, or rice boiled till it is dissolved, may constitute the diet. Should the calomel not operate well, and the fever continue, the following medicine should be given:

*Recipe* : Spirits Nitre, half ounce.  
 Venet. Terebinth., half ounce.

Mix. Give a tea spoonful, every hour, in some of the above teas. The vial should be shaken well every time, before the mixture is poured out. The calomel pills should be continued, till they have brought all the secreting organs into proper action. The first dose of calomel should be given after the first bleeding.

These are the remedies for the first stage. *Second stage.* This stage may come on, sooner or later, in the progress of the disease. The time of its appearance, and whether it will come at all, depend very much upon the violence of the attack, and the manner in which it is treated. If the disease has been neglected, or the remedies used have been too feeble, or too sparingly applied, the second stage will show itself as follows: The pulse is increased in number. In the first stage, the pulse-beats are one hundred, and from that to one hundred and twenty, in a minute; while in the second, they rise to one hundred and thirty or forty. Their stroke is also softer and weaker. The breathing is more hurried; the abdomen swells more, and is less acutely tender; the pain abates; the patient forgets or neglects her child, and the milk entirely fails. Sometimes a delirium accompanies the above symptoms; the bowels are still open, and the discharges are more fetid; the lochea is more diminished, if it is present at all, and has a very unpleasant smell; the urine is also diminished in quantity, is highly colored, and has a fetid smell. The tongue is generally dry — but not always so — and coated with a brown crust; the teeth are covered with a brown sordes,

and the gums are dark-colored. Hiccough now comes on, and the patient is much distressed by it; she is apt to throw up everything she swallows, and with it a brown or greenish-colored fluid, which sometimes has a disagreeable smell. In her lucid moments, she is anxious and restless, and discovers signs of great prostration. This is called the typhoid stage of the disease. Here we are almost sure to miss the treatment. Judging from the symptoms, we are very apt to give cordials, and tonics, and wine, to support the patient; but, by so doing, we miss the true practice very far. She is not sinking under *debility*, but under the *weight of disease*. The only thing we can do, in this stage of the disease, that will be likely to profit her any, is to keep the bowels open, apply the mercurial ointment all over the abdomen, and give the sweet spirits of nitre and spirits of turpentine, alternately, every hour. For the purpose of keeping the bowels open, use the following pill:

*Recipe:* Blue Mass, twenty grains.  
Pulverized Rhubarb, twenty grains.

Form eight pills, and give one every hour. To remove the inflammation, the following drops may be used:

*Recipe:* Spirits Nitre, one ounce.

and

*Recipe:* Spirits Turpentine, one ounce.

Give of these, alternately, every hour, thirty drops. They should be given in some mucilaginous drink; either of those prescribed in the first stage of the disease will answer. The *faeces* should be removed as soon as they are discharged.

Some have recovered from this stage of the disease by this treatment; while, perhaps, none would recover by means of stimulating treatment.

*Thirdly.* The third stage is marked by a pulse that is fluttering, and scarcely to be numbered for its frequency; the abdomen is very much swollen, and sounds as if it were full of wind. This is the state of effusion, in which cold clammy sweats break out over the whole body; but sometimes they are confined to the face and extremities. The hands at times appear shrivelled, as if they had been immersed in warm water for a long time. There is repeated chillness, without reaction, and the patient frequently vomits and discharges a dark brown or coffee-colored fluid. The stools are passed involuntarily, and there is at times a profuse discharge of bloody water, or black grume, from the uterus. The tongue is frequently moist. At this stage, the

patient will most probably suffer from convulsions, when death will close the scene. Cordials, wines, and drinks of this description, may yield a moment's relief, and therefore may be given. But it is in vain to expect aid from medical skill; at least, it is so in ninety-nine cases out of a hundred.

There is so much importance attached to this disease, for several reasons, that we feel disposed, at the close of this chapter, to give some general directions for the management of the patient laboring under it. And perhaps this could not be more satisfactorily done than in the language of *Dr. Dewees*, which we here present to our readers. He says: "It is of the utmost consequence to a woman laboring under puerperal fever, that her nurse or attendant should be faithful in the discharge of her duty; that she have sufficient understanding to comprehend the directions of the physician; enough good sense and fidelity to put them into practice; resolution to withstand the wayward resolutions of the patient, should they be made; and courage enough to bear up against the encroachment of friends, and the preposterous recommendations of visitors. Every direction of the physician should be promptly put into practice by the nurse; and that it may be done to the letter, it should be impressed again and again upon the minds of those who have the charge of the sick, by delivering them circumstantially, and without ambiguity, or the possibility of misapprehension. Nothing should be left for the patient or the nurse to construe. The directions must be so clear as to prevent the possibility of subterfuge. To insure this, the physician should ascertain, at every visit, whether his directions have been strictly complied with. If they have not, they should not be passed over with neglect, or it will surely be repeated. As this disease passes rapidly to a fatal termination when neglected, nothing can check it but the most prompt application of proper remedies, especially the proper quantity of blood drawn. The physician should perform this himself. The blood should be preserved, that its quality may serve as a guide to the extraction of more. As soon as the first blood is taken, the purgatives should be ordered, and everything followed up to the letter through every prescription. He should prescribe minutely the diet of his patient, which must be of the very lightest kind. We would here state particularly what we mean by a light or antiphlogistic regimen. This refers to a variety of particulars. First, the air of the room should be frequently changed by a well conducted ventilation. Its temperature must never exceed

sixty degrees if it could be helped; but it may sometimes be lower, when a lower can be commanded. The purity of the air should be preserved by removing all the impurities from the room as quick as possible, when they are tangible. But when they emanate from the patient herself, they must be alleviated as much as possible. The lochea are sometimes very offensive when not obstructed, and when this is the case, the parts should be frequently washed with warm water, her clothes often changed and wet with chloride of soda, or pyroligneous acid should be kept constantly near her, but not so as to wet her. If these cannot be had, powdered lime should be kept wrapped near her, and placed under the bedclothes, and also in various parts of the room. No curtains, or anything that would obstruct the air, should be kept about the bed. If the air is not too cool, the doors and windows should be frequently opened a little, nor should the air be contaminated with unnecessary breaths. Noise and light should be excluded as much as possible. The air should not be loaded with unnecessary vapors or smoke, under the idea of purifying it, for every kind of combustion is injurious. The diet should be made to conform most strictly to the indications to be fulfilled; namely, the reduction of the quantity of blood, and the action of the blood-vessels. Food, therefore, containing much nourishment, or any stimulus, should be avoided. The diet should be toast-water, barley-water, molasses and water, thin runnet whey, balm tea, orange, or gum-Arabic water. Every shape and form of animal food should be avoided and forbidden. No chicken-water, or beef tea, should approach the lips of the patient laboring under puerperal fever; much mischief has been done by a want of attention to this circumstance. Every article belonging to the bedclothes, body linen, or anything that may surround the patient, should be changed and washed as often as the circumstances of the case will allow, always avoiding exposing or fatiguing the patient. Care should be taken to keep the bedclothes from pressing on the abdomen, by placing half hoops, crossing each other, under the bedclothes. The abdomen should be frequently wet with spirits of camphor, ether, or spirits of turpentine; it acts as an evaporator, and is grateful to the patient, carries off much of the accumulated heat, and helps to reduce the inflammation. The patient should not be disturbed more than can be possibly helped in the giving of drinks, diet and medicines. A sick cup, therefore, should be used for the two first, and a spoon for the third. She should not be



allowed to rise frequently for the purpose of attending to the calls of her medicine, but should use a bed-pan, as it is important to avoid the exertion, and, also, to keep the circulation as quiet as possible. The child should be carefully placed to the breast frequently, so as to keep up the secretion of milk; but this should be done without any exertion or fatigue. The sympathy between the uterus and the breast is obvious, and as long as the breast can be induced to secrete, the uterus will be in part relieved by it. No possible danger can arise to the child from it; but if any should be superstitious on this subject, let some one else draw the breasts."

We have thus gone into all the particulars respecting this disease, not only in the symptoms, but its treatment in every stage, as well as the diet and drink of the patient, and the minutiae of nursing; and we earnestly hope that our labor will not be in vain, but may yield important assistance to others concerned in the charge of the sick, and enable them the more intelligently and efficiently to contribute to the safety and comfort of the patient.

## MILK LEG, OR PHLEGMASIA DOLENS.

Of all the diseases to which a lying-in woman is subject, perhaps this is the most painful. It has been noticed by a great number of writers, and the theories they have advanced, both of its remote and proximate cause, are various. But our object is not to indicate theories, but to treat of plain matters of fact; to describe symptoms, and point out the best mode of treatment of each disease of which we treat.

This disease may manifest itself at any time within the month. Its approach is frequently announced by premonitory symptoms, such as irritability of feeling, with a sense of great weakness and depression of spirits, without any apparent cause, though there may be some transient pains in the uterus. By these symptoms, the approach of the disease has been sometimes foretold.

When it is about to develop itself, a pain is suddenly felt, either in the calf of the leg or in the groin. When first felt in the groin, the pain is not so violent as when it first attacks the calf of the leg. In the last case, its approach is frequently as quick as the shot of a gun. It soon extends downwards to the inside of the ankle joint and the heel; thence, it stretches up to the ham and along the inside of the thigh to the groin and abdomen



Sometimes the glands of the groin are affected, swell, and become more or less painful. The whole limb swells to a very great size, and is extremely tender to the touch, but there is no redness in the skin; on the contrary, it looks white and shining, and a general paleness is spread over the body, the veins seeming to be but partially supplied with blood.

After the pain has lasted for some hours, the swelling begins to come on rapidly, when the pain partially subsides, although it is still very severe. But from the moment of attack, all power of motion in the limb is lost, while, at the same time, it feels like a dead weight attached to the patient's body. Every attempt by the attendants to move the limb, gives great pain, and causes feelings of faintness to come over the patient.

When the pain commences in the groin, it passes, with the swelling which it has caused, down the limb to the foot. We have seen cases in which the swelling extended to the breast, and even to the top of the head, occupying one half of the body as exactly as if a thread had been drawn from the *symphysis pubis* to the crown of the head; and have known the disease to extend over the other side, after that first attacked had recovered from its influence.

It is thought by some authors, that a female who has had this disease in one confinement, is not more liable to it in her next. Our own experience does not lead us to this conclusion. Two patients, whom we attended in the first attacks of this disease, were also its subjects in their next confinements; and we knew another lady who was attacked by it three successive times. Though one of the most painful forms of disease, if treated well, it rarely proves fatal. Of eighteen or twenty cases of this kind, we have lost but one; and perhaps under different treatment, even this might have been saved. The lady alluded to was our first patient, and treated after Dr. Denman's plan. But, since that time, we have adopted another course of practice.

**TREATMENT.**—This disease is one of highly inflammatory action, and consequently requires active anti-phlogistic treatment. The first thing to be done is, to take as much blood from the patient as the state of her pulse will bear. The bleeding may be repeated two or three times, according to circumstances. The patient should then be purged, and the following medicine may be used:

*Recipe:* Calomel, twenty grains.  
Pulv. Rhubarb, twenty grains

Form eight pills. Give four at first, and the other four in three hours. After they have operated well, the bowels should be kept open by :

*Recipe :* Epsom Salts, one ounce.  
Calcined Magnesia, half ounce.

Mix together, and give a tea spoonful every three hours, in sweetened vinegar and water, or lemonade, till she is again freely purged. After this, the medicine should be given so as to cause three or four stools every twenty-four hours. The patient's drink should be, balm tea or rice-water, barley-water, and gum-Arabic water ; and her diet, gruel, sago, rice, arrow-root, toast-water, tea, and light bread.

The limb must be guarded from the pressure of the bed-clothes by a hoop, cut in the middle, crossed and tied, and placed so as to act as a spider, and support the clothes. The leg and groin should be frequently bathed with warm vinegar, and a flannel should be wet with the same, and kept constantly applied to the hollow of the hip. Care, however, must be taken, that it does not wet the bed. After each washing with the vinegar, the whole limb should be bathed with the following liniment :

*Recipe :* Pulv. Opium, two drachms.  
Pulv. Camphor, half ounce.  
Castile Soap, two drachms.

Dissolve the medicine in a pint of whiskey, and keep it warm, shaking it frequently, till it is perfectly mixed. The limb may be rubbed with this three times in twenty-four hours, and its use should be rigidly persevered in till the swelling goes down.

The indication of the subsiding of the swelling will be noticed by rubbing the hand gently over the inside of the thigh and leg. Small lumps will be felt along the course of the lymphatic vessels, and by pressure of the finger, the limb will pit. A bandage may then be applied tightly around the limb, from the toes to the hip, and it may be drawn a little tighter every day, till it can be drawn quite tight and smooth. It should be taken off and reëplied night and morning, every day, till the limb recovers its strength, which will be some weeks after the patient can walk about.

When all fever is removed, as she will feel weak, she may take a more nourishing diet, together with some elixir of vitriol, with a little good wine. As soon as she is able to take exercise, a ride in a carriage will be of service to her ; but she should

avoid a fatiguing walk, or ride on horseback. A relapse is no common in the disease, so far as our observation has gone.

Blisters have been recommended by many writers on this disease, and used by many others; but we have never either used them ourselves, or known them to do good in the hands of others. We are satisfied that the irritation and troublesome sores which they produce do more harm than the blisters do good, and therefore we never advise them. Nor, for the same reason, would we recommend leeches or cups. In a reasonable time, with the remedies above laid down, we have always succeeded in the treatment of this disease, and generally, indeed, cure our patients in about half the time that others take with different treatment.

If the secretions from the vagina are fetid, a wash of milk and water, or castile soap and water, or charcoal water, may be used as a corrective.

#### INFLAMMATION OF THE WOMB, OR HYSTERITES.

The causes of inflammation of the womb are various; such as violent labor, harsh and improper treatment in delivery, and too sudden or violent efforts used to extract the placenta, independently of those which are natural to that process. These may be,

*First.* The long and reiterated efforts which the uterus may be forced to make, to overcome the resistance which opposes the expulsion of the child; the construction of the pelvis; or the size or situation of the child.

*Second.* The violence committed in the use of instruments of any kind; or to the ill-directed efforts to dilate the mouth of the womb; or by too frequent and rash handling.

*Third.* By a rash delivery of the placenta, especially if it has adhered to the womb; or if the hour-glass contraction has been formed, and the hand has to be passed to take the placenta away.

*Fourth.* It may arise from cold, checked perspiration, or improper diet, or the neglect to keep the bowels in a proper condition.

*Symptoms.*—Let the cause that produces inflammation of the uterus be what it may, it generally develops itself in four or five days after delivery. The patient complains of pain in the lower part of the belly, just above the pubis, which is increased by pressing on that region, or by anything that may disturb the quietude of the uterus, as turning in bed, making water, sitting

up, or going to stool. By feeling the region of the uterus, it will be found to be enlarged, and very sensitive to the touch. The pain which the woman feels is constant, but is increased when the after-pains come on. That which arises from inflammation of the uterus, however, may be distinguished from after-pains, inasmuch as it never ceases entirely, while they continue only with the contraction.

The abdomen does not swell, in the commencement of this disease, there being no other enlargement than that from the swelling of the uterus; and this can only be known by applying the hand to the organ. The abdomen does not participate in simple inflammation of the womb, and hence there is none of that tenderness, or tightness, which is formed in inflammation of the peritoneum, in puerperal fever.

If there has been mechanical aid in the delivery of the child, the patient usually feels pain in making water; and, in some instances, has a frequent desire to void it, though but little will pass, and sometimes none at all. Every effort of the kind gives pain, and the urine is high colored, and small in quantity. The heat of the body is soon increased; though sometimes the patient is chilly, yet in other cases she is not so. She also suffers from a violent pain in the head; and if the fever is not removed, delirium is apt to ensue. The tongue is white, and much loaded with coating; the mouth is drier than usual; the pulse is full, strong, and hard, though generally under a hundred beats in a minute. If it should rise to one hundred and twenty in a minute, we may be sure that the disease is complicated with peritoneal inflammation; or the patient is rapidly sinking, and will in all probability die.

The patient is not liable to a sick stomach in this disease, especially in its commencement. As the disease progresses, the pain extends itself to the back, and down the thighs, and sometimes there is a pain in the left side just below the ribs. The lochea is generally more or less interrupted, and sometimes entirely obstructed, in inflammation of the uterus. It is thought by some that the suppression of the lochea is the cause of inflammation of the womb; but the reverse,—that is, that the inflammation is the cause of the suppression of the discharge,—is no doubt the truth; and the diminished secretion of the uterus is, therefore, the consequence, and not the cause, of this disease. The less, however, that this discharge is affected, the less will be the danger from the disease. The return of the lochea in this

disease is always a favorable symptom, and shows that the cause which checked its flow is giving way, and the chances of a favorable recovery are returning.

In pure or simple inflammation of the uterus, the breasts sympathize but little. They frequently secrete milk in their ordinary quantity, but as soon as the peritoneum, or the ovary, is involved by the inflammation, the secretion of the milk is almost entirely arrested. *Dr. Devees* says he has seen "the offices of the breast entirely undisturbed during the whole course of the inflammation of the uterus." If the disease should not continue too long, this may be the case.

If the abdomen be enlarged, it is because the uterus or its vessels contain large quantities of blood, the expulsion of which is extremely painful. But the more freely it is expelled the better.

In the first stage of this disease the bowels are generally bound; but occasionally the disease is ushered in by a diarrhœa, though this is not often the case. If the disease end fatally, however, a diarrhœa frequently attends the closing scene. When the disease runs to an unfavorable issue, suppuration takes place in the substance of the womb, and the matter may be safely discharged by the vagina. It may also be discharged into some of the cavities, as the pelvis or abdomen, or detained in the substance, as well as the sinuses of the womb.

When the disease is about to terminate in suppuration, the pulse becomes more irritated, and increases both in frequency and in quickness; the patient becomes chilly, alternately dry and moist; the cheeks flushed, and of a deep purple or crimson color, and the tongue dry and red. The lochea escapes in large quantities, and is very fetid; and the patient sinks rapidly from irritative fever.

**TREATMENT.**—The remedies to be used for the cure of this disease are, *First*—Blood-letting. The lancet is almost our only hope. The patient should, therefore, be bled freely from the arm; and if she become faint, it will do her the more good. She should, at all events, be bled till the pulse and skin become soft. If the disease continue after the use of other remedies, she should be bled again, if the pulse will justify the use of the lancet. But if it will not, she should be cupped or leeches over the uterus.

*Second*—Purgatives.

*Recipe:* Calomel, ten grains.  
Pulv. Rhubarb, ten grains.



Form eight pills. Give four at first, and the other four in two hours. If they should not operate, in two hours more a dose of castor-oil may be given, or injections may be administered. As soon as the bowels have been freely moved, the following mixture may be taken :

*Recipe* · Sweet Spirits of Nitre, half ounce.  
Venice Turpentine, half ounce.

Mix. Give a tea spoonful in slippery-elm or flax-seed tea, and repeat every hour. The above pill should be repeated every day, till the tongue begins to clean off.

When the fever is high, the following cooling powders may be given :

*Recipe* : Cream Tartar, one drachm.  
Salts Nitre, twenty grains.  
Tartar Emetic, one grain.

Mix in six papers. Give one every hour in balm, hyssop, or sage tea, while the fever is on. If they produce a perspiration, their action will be the more beneficial. After the tongue begins to clean off, the bowels may be kept open with the following pill :

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap,—of each twenty grains.  
Tartar Emetic, two grains.

Form twenty-four pills. Three or four of these may be taken at bedtime, every night, or just as many as will operate once or twice the next day. These should be continued till the patient gets well.

The vagina should be opened and loosened by the finger every day, in a very gentle manner, so as to let out any fluid that may be there collected.

Emetics should never be administered to a patient in this condition. Opiates are often spoken favorably of by various authors, but we have never known them to do good ; but, on the other hand, much harm. Her diet should be light, composed principally of gruel, sago, rice, tea, toast-water, arrow-root, &c. Her drink should be, slippery-elm tea, flax-seed tea, hyssop, sage, balm, and dittany, or mallow tea.

When she is recovering—as she will be very weak, if the disease has been protracted—she may take a little good wine and water, and some gentle and mild tonic, such as,

*Recipe:* Gentian Root, half ounce.  
Orange Peel, half ounce.  
Columbo Root, half ounce.  
Black Snake Root, half ounce.

These should be put into a quart of good Madeira wine, and shaken every day for three or four days. A table spoonful may be taken, three times a day, in water; and, at the same time, ten drops of elixir of vitriol may be taken, before each meal.

The symptoms of recovery are these: When the disease is about to yield, all the symptoms abate, the tumor begins to subside, the tongue becomes more clean, the mind is more settled, the fever abates, the skin becomes pleasantly cool, the lochea returns in its more natural character and color, the urine is secreted more freely, and is clearer, the breast secretes more milk, the patient rests better, and is more cheerful, and her appetite begins to return. All these are symptoms which indicate the recovery of the patient.

#### OF INVERSION AND PROLAPSUS OF THE UTERUS.

This subject is one of much importance, and should be well understood by all midwives and mothers.

Inversion and prolapsus of the uterus may occur from several different causes. *First*, it may be produced by too hastily delivering the after-birth; and, *second*, it may be produced by the patient herself. In the first instance, by the *midwife*, by hastily pulling the after-birth away, when it has been attached to the fundus of the uterus. This can only happen when the child has been suddenly delivered, and the uterus has not contracted, and the midwife has neglected to make it contract before she removes the after-birth. If, in this uncontracted state of the uterus, with the after-birth attached to its fundus, a sudden pull be made at the cord, and it does not break, the fundus of the uterus must be brought down and folded into itself as you would fold the finger of a glove.

In the second instance, the *patient* may produce this accident herself, several days after the child is born. This never happens unless the woman is, as it is called, very smart. The uterus not having contracted as it should have done, the patient, having either laid aside her bandage, or wearing it loosely, arises from her bed, and makes some exertion in lifting, or reaches up above her height, or suddenly rises or sits down,—the uterus being in a relaxed state,—and a falling in of the

fundus of the womb is the result. If the cervix be well contracted, the fundus will rest upon it, and not come so low as to be easily felt; but if the cervix be relaxed, the fundus may fall through, so that it can be felt. When the cervix is contracted, and the prolapsed fundus lodges upon it, the patient may die, and the cause never be known, unless a physician should be immediately summoned, who is acquainted with the nature of such accidents.

In every case, let the cause be what it may, we have but one remedy for each position of the inverted uterus. When it has lodged against the cervix, the midwife should, if possible, pass the hand so as to place three fingers against the uterus; and if, by steady and constant pressure, she can return the fundus to its proper position, the life of the patient may be saved. When the fundus has passed through a relaxed cervix, and forced its way through the os uteri, that body will be certain to contract upon it, being stimulated to this contraction by the pressure of the uterus itself. In this case, there is but one remedy, and that is, to grasp the uterus and bring it through the os uteri. The strongest effort that can be made to pass the uterus up, will fail; bringing it down, therefore, is the only hope of saving the patient's life.

As we have now given the effects of this fatal catastrophe, we proceed to describe its visible symptoms. In those cases where the lady is able to walk over the floor in a few days after the birth of her child, after stooping, perhaps, two or three times, with a quick motion, or making some muscular exertion, she feels an inward weakness; a sensation of faintness or sinking comes over her, and she either falls on the floor or lies down on her bed. She becomes pale; her pulse flutters, and becomes weak; a cold sweat may, or may not, appear on her skin; the faintness continues, and ere the friends can administer relief, in ten or fifteen minutes from the time she began to complain, her sufferings are at an end; she is dead. There is no discharge from the vagina, for the best of all reasons; the uterus has filled the vagina so completely that nothing can pass out of it. Neither the nurse nor the attendants can assign a reason for her death, while the case is as plain as it is possible for a case to be. It is that of an *inverted uterus*. Is proof of this demanded? Let the inquirer pass her finger into the vagina, and she will find a tumor there resembling a child's head; and to prove that this is

the uterus, let her place her hand on the abdomen, and she will find that the uterus is not there, but has escaped into the pelvis.

Now let us look a little further back, and see if this fatal accident could not have been prevented. We assert, unhesitatingly, that it could. And if the doctor or midwife who delivered the patient had caused a firm contraction of the uterus to take place, applied a proper bandage, and had given instructions to the patient as to the mode of wearing it, and why she should wear it, all this evil might have been prevented.

When this accident happens immediately after delivery, the symptoms are as follows: A sudden gush of blood from the uterus, when it is partially inverted; sickness of the stomach, vomiting, fainting, a cold, clammy sweat all over the body, great prostration of strength, and a pulse very feeble, or entirely arrested. The placenta may be discharged, or it may not. When the patient is in this situation, let the midwife place her hand on the abdomen, and she will not feel the contracted uterus; but, by passing her finger into the vagina, she will find it folded within itself, and protruded, more or less, through the os uteri. If the placenta is not yet removed, she will feel it distinctly, separate from the tumor that the fundus makes by its side. And now is the moment to give relief, and save the life of the patient, if it can be saved at all. She must immediately remove the placenta, as gently as possible; not by pulling at the cord, but by passing up her fingers, or hand, as the case may admit, loosening the placenta, and taking it away. After this, she must pass her hand again into the vagina, place her fingers in the most favorable position, against the most depending part of the tumor, and steadily, but firmly, press it upwards, till it is loosened from the grasp of the neck of the uterus, when the effort must be continued, till it is placed in its proper position. Let her then withdraw her hand gently, and allow the uterus to contract. This, however, can only be done when it is partially inverted, and then the remedy must be prompt, or no benefit will be derived from it. All this must be done very speedily, or the patient will die before the proper remedies can be applied.

There have been cases of complete procidentia, where the womb has turned inside out; and here the mouth of the womb projects upwards into the abdomen, and the fundus lies between the thighs. In this situation, the os uteri contracts so firmly upon itself, that all attempts to reduce it will be unavailing. *Dr. Dewees* says: "I acknowledge there are cases on record,

where the uterus was said to be inverted in procidentia; but I have not seen proof enough to satisfy me that it was truly a case of that kind, and reduced." When it could not be reduced, in order to save the patient's life, the uterus has been completely inverted; which operation will, at least, save from immediate death. *Dr. Dewees* once completely inverted a procidentia which he could not reduce; and we have no doubt but that he saved the life of the patient by so doing, as she finally recovered, and lived many years.

Our object in saying so much on this subject is, to point out to the midwife the necessity of using the remedy for relief without a moment's delay, and also to warn her against a hasty delivery of the after-birth, and leaving her patient before the uterus has taken on a sufficient tonic contraction to prevent an inversion. The mother may also learn not to be anxious to be called "*smart,*" lest, by so doing, she produce this dreadful accident; and we trust that all who are interested therein will give the subject that attention which its importance demands.

## MANIA, OR MADNESS.

Puerperal mania is a disease of a very distressing character, but happily it is one of rare occurrence in this country. It does not confine itself to the lying-in woman at all times, but, in some cases, occurs in the earliest stage of pregnancy; in others, when the time of labor approaches; and in others, after the patient is delivered.

This disease is apparently caused by some extraordinary disturbance in the uterus, but irritations in other parts may produce it, as when the breasts have been inflamed, or an abscess had been formed, and this at the time of first suckling or weaning the child. In many cases, the disorder has been occasioned by an uncommon irritation in these parts, extending its influence to the brain; and this may occur without any reference to former habits, either acquired or hereditary. If the nervous system be once disturbed so as to take on this result, the cause which in one patient would produce convulsions, and in another paralytic affections, may in a third produce *mania*. Some persons who have long suffered from intermittent fevers, are subject, on certain occasions, to melancholy, or mania. Sudden alarm in the female, either for herself or child, may excite this disease into action, even where there was no tendency to it before. *Dr. Denman* says he has seen more than one instance where this disease has



been excited into action by a dismal story being told in the presence of the patient, when she might have escaped if it had not been for those busy gossips.

This disease is at times so gradual in its approach, that its character is not fully known for some time. Frequently, the first symptoms that are discovered are these: the patient begins to distrust her best friends, and especially her husband; she begins to dislike her child; is not willing that any of her former friends should do anything for her; is irritable, restless and fretful; has more or less fever; her tongue is white; her pulse quick; her eyes are inflamed or glistening; the heat of the body is increased, and she has the general symptoms of fever. The delirium is of its own kind; and even when the case becomes chronic, there is at all times a peculiar pulse that indicates fever. It is not unfrequently the case, that, on the commencement of the attack, there is, with the peculiar appearance of the eye, a yellowness of the skin, and sometimes, indeed, it appears to be jaundice.

**TREATMENT.**—When the skin is yellow, emetics may be given as the first item in the remedies to be administered.

*Recipe:* Pulv. Ipecac., twenty grains.  
Tartar Emetic, three grains.

**Mix.** Dissolve this powder in nine spoonfuls of warm water, and give three at first, and one every fifteen minutes afterwards, till they operate freely. The operation may be aided by warm water.

If the pulse be hard and sharp, blood should be taken, in proportion to the patient's strength. After the bleeding, use the following medicine:

*Recipe:* Calomel, twenty grains.  
Pulv. Rhubarb, ten grains.

Form six pills. Give three and wait three hours, after which give the other three. When a few doses of the above pills have been administered, the bowels may be kept open with,

*Recipe:* Blue Mass, twenty grains.  
Scammony, twenty grains.  
Aloes Socot., twenty grains.

Form fifteen pills, and give three or four of them every night. If the patient have much fever, give the following mixture:

*Recipe:* Cream Tartar, one drachm.  
Salts Nitre, one drachm.  
Tartar Emetic, one grain.

Mix in six powders, and give one every two hours, in balm sage or hyssop tea; or,

*Recipe:* Sweet Spirits Nitre, half an ounce.  
Wine of Ipecac., half ounce.

**Mix.** Give thirty drops every hour, in one of the above teas.

The patient's diet should be light, and altogether vegetable; not even chicken-water should be given. The room should be well ventilated, and the patient must be kept as tranquil as possible. Her various notions should be complied with as far as her own safety and welfare may allow. In a word, everything that may tend to keep her calm should be done.

As the sight of her child or husband frequently excites and enrages her, they should be kept out of her sight till she calls for them. She is apt to wish to be removed to a friend's house; as soon, therefore, as it can be safely done, let her be removed. She may also ride out in a carriage and take the air. When she begins to mend, great caution must be used in the increase of her diet; and stimulants or tonics must not be given, lest fever be thereby excited, and the disease brought back in all its violence. Let her system be well prepared for delivery before her next accouchement, and let all exciting causes be carefully avoided.

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## PART V.

### OF DRESSING THE CHILD AND MANAGEMENT DURING THE MONTH.

**AFTER** the child is born, and is sufficiently strong to be dressed, if it has much white gum on it, the nurse should grease it all over with lard, which must be washed off with mild soap and moderately warm rain-water. A little spirits added to the water will supply the place of soap. The skin should be made perfectly clean, and wiped dry before the child is dressed.

The umbilical cord should next be put up; and this is to be done in the following manner: Let the midwife take a piece of old, soft linen or cotton cloth, about five inches square, and cut a hole in the middle of it, large enough for the cord to pass through, and then fold the upper edge of the cloth down so as to touch the cord. On this she must lay the cord, pointing straight upwards; fold the cloth from below over it so as to cover the cord entirely; and then fold the cloth over from each side so as to make a square. She must then put on the waistband, which may be made of flannel in winter, and of linen in summer. It should be broad enough to cover the child from the hips to within an inch

of the armpits, laid smoothly, and tied or pinned; though tying with tapes is the best. If, however, pins are used, care must be taken to let every point rest on the outside of the band, and so with all the pins that are used in dressing the child. After the waistband is put on smoothly and tolerably tight, the remainder of the clothing may be arranged as the taste of the mother may direct; taking care, however, to have the sleeves long in cold weather. Caps should always be used in winter, but never in warm weather. This will guard the child from cold in the head, sore ears, and perhaps deafness.

If the child is oppressed with phlegm, which is sometimes the case, half a tea spoonful of molasses, mixed in two tea spoonfuls of warm water, or a few grains of salt in water, should be given, and either of these will remove the phlegm and open the bowels. The molasses and water may be repeated three or four times a day, for three days, or until the mother has a flow of milk, when the child should always be put to the breast. If there obtains the food which nature has provided for it, and nothing which art can prepare is so well adapted to its necessities.

If the first passages should not be thrown off freely, a little catnip tea, sweetened with molasses or brown sugar, should be given two or three times a day, for a few days; or a tea spoonful of sweet oil, or pure castor-oil. But no strong medicine should be given for this purpose. If the child should not make water freely, a tea, made of watermelon, pumpkin seeds, or parsley tops or roots, may be given. The warm bath, also, will assist in alleviating this symptom. If all these remedies fail, the parts should be examined, to ascertain whether the urethra or water-passage is not closed; and, if so, it should be opened by a person who understands the operation.

As soon as the mother has milk, that alone should constitute the diet of the child. Nurses are too apt to give pap, toast-bread-water, and many other things that are only calculated to sicken; for the infant stomach cannot digest any of these things, and if not digested, they will create colic. It is too often the case, that whenever the child cries, it is considered hungry, and other potions must be prepared and administered. By this course, its stomach is soon filled with teas or pap, or other articles which it ought never to have taken; and if nature is not able to relieve itself, by throwing up the offensive doses, the child will either have a fit, or be doomed to suffer the tortures and pain of this destructive course of feeding. From its cries and evident signs

of pain, the nurse concludes the child is suffering from the colic, and therefore gives it some soot tea, or a little weak toddy. If the last be given, it presently falls asleep from the effect of intoxication, and as the necessary result, awakes with pain in the head. It cries aloud, since this is the only way in which it can make known its pain, and it is again dosed, or pronounced naturally cross, and the nurse adds her testimony that it is always crying. It would be strange, indeed, if it were not. But no child is cross in infancy, unless bad nursing, improper diet, or neglect, make it so. But crying is not the worst. Ninety-nine fits out of a hundred, which children have before they are a year old, are produced by improper feeding.

The eyes of an infant should never be allowed to receive a strong light, for many have lost their sight from this cause alone. If the infant's eyes become sore, within the month, they should be washed with its mother's milk, or with a tea made of slippery-elm bark, strained. The eyelids should be opened frequently, to let the matter escape, otherwise the eye may be destroyed. (See chapter on *Sore Eye of Infants*.)

The navel-string will begin to suppurate a little in twenty-four or thirty-six hours from the birth of the child; and when this is the case the compress in which it is folded should be raised up gently, and a small feather, oiled, passed around the cord, and the compress replaced. This should be repeated every day till the cord comes off; after which, the nurse should sprinkle the sore with pulverized nutmeg, and spread over it a plaster of tallow, burnt till it is black, and renew this process every day, till the navel is healed. If it should suppurate much, it must be washed with castile soap and warm water every time it is dressed. A firm compress should be kept over the navel till it has healed perfectly. In some instances the umbilical ring is very large, and the navel projects too far. In this case, after the sore has healed, a compress of sheet lead, as large as the palm of the hand, should be bound firmly over the part, and kept there by, or sewed fast to, the waistband, that it may not slip. It should be worn till the umbilical ring closes firmly around the cord, and the navel sinks down, and retains its position.

The infant should be washed all over, in tepid water, every day; but no soap should be used, unless the skin cannot be cleansed without it; in which case, the child should be rinsed with water containing a small portion of oil. The soap removes

all the natural oily secretion from the skin, and renders it more liable to chafe and chap.

The infant's head should be kept free from dandruff or scruff; for the pores being closed by dandruff, is a fruitful source of disease of the brain. Many diseases will be avoided by keeping the skin clean and soft and the pores open.

#### ULCERATION, OR IMPERFECT HEALING OF THE NAVEL.

The umbilical or navel string separates from the navel between the fifth and tenth day. This is altogether a natural process of the system of the child; yet we occasionally have to aid nature in its performance.

The cord, at times, remains attached by small filaments for several days after it should have been thrown off. In this case, it should be clipped off with a pair of sharp scissors. This is the simplest impediment to healing.

The healing may also be prevented by fungous flesh springing up, and discharging purulent matter, of an offensive character. This condition of the navel generally alarms the mother, though there is no danger in it, if it be properly managed. This discharge will not cease unless means are used to arrest it, nor can the parts heal while it continues. This fungus will always be found in one of three conditions: *first*, the navel may exhibit an elevated ulceration of its whole surface; *second*, it may form a kind of button, with a narrow neck, or pedicle; and, *third*, this button may have a broad base.

The treatment in each of these conditions requires to be slightly varied. In the *first case*, it will be necessary to sprinkle it with powdered nutgalls, calomel, or an old shoe-sole burnt to a cinder and finely pulverized. Over this a plaster of burnt tallow, made fine by working it in the hand with a knife, must be applied; and, after a few days, the parts will peel off. The application must be continued till the parts are entirely healed. But they should be cleansed with castile soap and water before each dressing.

In the *second case*, a dark-red, round tumor may be seen within the cavity formed by the retiring of the navel; and, when pressed out, it will have a footstalk, like a cherry, attached to its stem; except that the stem is larger and shorter than that of a cherry. All that is necessary in this case is, to pass a silk thread, waxed, around it, and tie it tight; after which the tumor will drop off,



without causing any pain. Sometimes it will not heal immediately after the tumor drops off; in which case, the remedies prescribed in the first instance should be used.

In the *third case*, a ligature cannot be applied, as the base is too broad; but the remedies prescribed in the first case should be tried, and, if they fail, a weak solution of the nitrate of silver will be found of great service. This should be applied lightly, with a hair-pencil, or a small feather, and the application should be repeated every two or three days, till the parts are taken off to a proper level. When this is accomplished, the plaster first directed should be applied. In using the solution, care must be taken to touch no part but the sore. It is prepared in the following manner:

*Recipe*: Pulv. Lunar Caustic, four grains.  
Rain-Water, half ounce.

Mix, and shake till it is properly dissolved. The vial should be well shaken before the solution is used.

#### OF THE RED, WHITE, OR YELLOW GUM.

Infants are subject, a few days after birth, to an eruption on the skin, which is called gum, and may be either red, white, or yellow. It is named from the color it assumes, and is composed of small pimples, containing a little fluid. There is a saying, that the more copious this eruption is, the fairer will be the child's skin when it is removed.

The color of the eruption depends upon the first passages, or the state of the circulation. If the liver should be a little torpid, and the bowels constipated, the gum will be yellow; but should the liver act well, and the meconium, or first passages, not be sufficiently copious, the eruption will be red. If the liver and bowels are both sufficiently active, the eruption will be white, because of the unusual activity of the lymphatic system. In the case of red gum, the arterial system is always active, and the skin always thin, as when the child is born a little before its time. Neither of these eruptions is attended with danger, if properly treated.

When the gum is red, and the bowels are not properly cleared of meconium, a dose of castor-oil—say one tea spoonful—should be given, to move the bowels freely. When the gum is white, and the bowels are in a good state, no medicine is necessary; but a little hair-powder should be dusted on the surface, and the child washed with warm, soft water, once a day, for a

few days. When the gum and the skin are yellow, the whites of the eyes are sometimes of the same color; which is also an evidence that the liver is torpid, especially if the urine be yellow. To remove this, a little tea, made of the root of rhubarb, and containing a small portion of calcined magnesia, may be given. If this should not prove effectual, after being repeated a few times, half a grain of calomel, mixed in the sirup of rhubarb, may be used, and repeated once in six hours, till the bowels are freely moved. This, however, must be followed up the next day with a dose of castor-oil.

Some ladies are so much afraid of calomel that they would see an infant die before they would administer it; and in this case, if it be neglected, the infant may die. Although in the case of which we are speaking, the liver is active, yet the gall-ducts are closed, and the bile is reabsorbed and carried into the circulation after the liver has secreted it, the absorbents having taken it up and deposited it in the skin. Nothing so certainly and effectually opens the gall-ducts as a dose of calomel; and in many cases nothing else will produce the desired effect.

#### PRICKLY HEAT.

Children of all ages, from a few weeks old up to manhood, are subject to prickly heat. It appears in children in the form of small, pearl-colored, or brownish, or pink-colored, and sometimes innumerable red spots, with a very light, rose-colored base. This symptom commences with a sensation of tickling, or prickling, from which it takes its name.

When these points are situated between the fingers, especially if aggravated by scratching, it may be mistaken for itch. But its sudden appearance, the points being sharper and redder, attended by a sensation of smarting rather than itching, readily distinguishes it from that complaint. It may subside suddenly, and almost without scaling; the water in the little points becoming thinner, and being, therefore, more readily taken up by the absorbents. In other cases, a brownish scab will form, leaving the skin wrinkled, and producing fever and a deranged state of health, from irritation. When this eruption has spread over the hand, we have known the skin to peel off in large scales. In children this disease rarely assumes a chronic form, but is sometimes of that character in adults.

**TREATMENT.**—The treatment consists in gentle, cooling laxa-

ives and sudorifics; and when the fever subsides, some gentle tonic should be given.

*Recipe:* Pulv. Rhubarb, ten grains.  
Calcined Magnesia, twenty grains.

Mix, and divide into four papers. To a child two years old, one of these may be given every three hours, in sirup, till they operate freely. If the child be older or younger, the dose should be proportioned accordingly; or the following may be used instead:

*Recipe:* Castor-Oil, half ounce.  
Spirits Nitre, one drachm.

Mix them together; and, to a child one year old, give a tea spoonful every two hours, till a free operation is produced. As in the other case, the dose may be increased or diminished according to age. Or, if preferred, the following may be given:

*Recipe:* Fol. Senna, half ounce.  
Manna Flake, half ounce.

Simmer them in a half pint of water, to a strong tea, of which a table spoonful, every two hours, may be given, till free purging is induced. Or you may give,

*Recipe:* Rochelle Salts, half ounce.

Dissolve in two table spoonfuls of water, and give one spoonful every hour, till they operate well. The water may be sweetened with white sugar. Or, if preferred, try,

*Recipe:* Cream Tartar, two drachms.  
Milk of Sulphur, two drachms.

Mix them together, and give a level tea spoonful, in sirup or honey, every two hours, till the bowels are freely moved. If at any time the stools are of a light clay color, and smell badly, a few small doses of calomel should be given.

*Recipe:* Calomel, ten grains.  
Salts Nitre, two grains.

Mix. Divide into six powders, and, to a child two years old, give one powder, in sirup, and repeat every two hours, till they operate well. If the child should be older than this, a grain may be added for a year; but, for one of five years old or upward, only half a grain should be added for each year. Cold water should never be given till this medicine has done operating.

The drink for children laboring under prickly heat should be, barley-water, rice-water, sweetened whey, orangeade, very weak lemonade, or cream of tartar in water. The diet should be light

and cool, and the dress light. After the fever subsides, *some* strengthening medicine should be given, such as,

*Recipe* : Huxham's Tincture, one drachm.

For a child two years old, twenty drops, in sweetened water, three times a day, will be sufficient. The dose may be increased or diminished, according to age. Or,

*Recipe* : Muriated Tincture of Iron, half drachm.

Give three drops, in sweetened water, three times a day. If the patient lives in the country, where these things cannot be had, a decoction of red dogwood and yellow poplar bark, with a little spirits added to it, may be given, three times a day; a table spoonful for a dose.

The external remedies are, washing the body with tepid water; after which, the skin should be well dusted with starch or hair-powder. The child should always sleep cool; but if the eruption irritates it, so that it cannot sleep, a few drops of paregoric, or a tea spoonful of tea made of poppy blossoms, sweetened, will be beneficial; and when nothing else will quiet the child, the following ointment will sometimes have that effect:

*Recipe* : Simple Cerate, one ounce.  
 Otto Roses, ten drops.  
 Sugar Lead, twenty grains.

Mix into an ointment, with which, after washing the child, it should be anointed lightly all over. The linen should be changed frequently, and as fine and as thin clothes as possible should be worn, and proper exercise taken in the open air.

#### ON THE NOURISHMENT OF INFANTS.

The infant needs a certain amount of nourishment, which should, if possible, be derived from the mother. She will be able in a few days to afford the requisite amount, and it would, therefore, be wrong to substitute an artificial diet.

It is sometimes feared that the mother will be weakened if she suffer the child to suck to its full satisfaction; but this is a mistaken apprehension. The breasts are by nature adapted to the secretion of this fluid, and they will supply it, if the mother take proper care of herself. Is it not better for the child to take this milk away by the natural process of sucking, than to allow the absorbents to remove it by another process? On every principle of good reason, this would be most certainly the better course

When the milk has flowed into the breasts, the system has suffered all it can suffer from this process, if, indeed, it has suffered at all. How, then, can it be said that taking it away will be calculated to weaken the person? But, on the contrary, should the absorbents be compelled to take it up, as they must if it be not withdrawn by the child, a new process of secretion will necessarily be performed, which will probably create fever, and produce unfavorable results, for some other organ must throw it off.

Another plea is urged by thousands, that the child should be early taught to eat; so that, in case the mother should be taken sick, it can be fed; or, if she should wish to go from home, she need not be hurried back to nurse it. The first reason is a very flimsy one; for if the mother should be taken sick, the child may then better be taught to eat, as it may be older, and consequently less likely to receive injury from the change. But the mother may not be taken sick at all; and then the necessity for feeding will not exist. And as for the argument drawn from the desire of the mother to visit, we have only to say, that she, who, for the pleasure derived from a party, can deprive her child of the food which nature has ordained for its use, is unworthy of the endearing title of mother.

A child should not be persuaded to nurse when it is not hungry, and once in two hours is quite often enough to satisfy all the demands of its system. Time should be given the stomach to digest what it has taken in, before it receives more. After an infant is six months old, it should not nurse more frequently than once in three hours; and if the mother will accustom it to these rules, she will have but little difficulty in this particular; nor will she have need of pap, or bread-water, to satisfy its demand. The mother should learn, from observation and attention, how much the child should take at one nursing, and remove it from the breast when she is satisfied it has received this quantity.

The breast should not be given every time the child frets, for the purpose of quieting it; for it may cry from too great a distension of the stomach; and if the mother follow this course, under such circumstances, the pain will of course be increased. If a hurt be the cause of its crying, the breast will not cure it; if pain, an increase of food will only heighten it; if colic, the wind will be likely to be confined more closely by surcharging the stomach; and if acidity of that organ, the acid will clot the milk, and increase the pain. The mother should try at all times to ascertain what is the cause of the child's crying, and direct the remedy



accordingly. If it is the result of bad habits which have been taught it, let those habits be corrected as soon as possible. But more cries are extorted from children by the goad of a pin, the smarting produced by a wet diaper, the rolling up of the waist-band, or the pressure of tight clothes, than by hunger. It is an easy matter to accustom the stomach to take more food than is necessary for the support of the system; in which case, more or less derangement will ensue. As it is with the adult, so it is with the child; if either take more than is sufficient to satisfy the demands of nature, he must certainly, and in a short time, feel its bad effects. Give to the child, in addition to its natural and wholesome food, the various articles with which mothers and nurses are apt to load the stomachs of the little ones committed to their charge, and the most serious result may be expected. And the experience of every day confirms the expectation. The best method, therefore, is to give the child the breast only, and let it have it at regular periods, and as nearly as possible in the same quantity at each time; and much trouble will be saved the parent, and much suffering to the child.

After it has attained to the age of six months, some regular system should be observed in all its little supplies, whether of nursing, receiving food, rest, or exercise; and as life consists in a routine of habits, it is a matter of much moment that only such habits be established as will most effectually serve the best purposes of the system. There are but few circumstances that will justify the feeding of an infant at a very early age; and where the mother's milk is unhealthy in quality or insufficient in quantity, if the infant is very young, a wet nurse should be obtained, if it can be done.

In the choice of a wet nurse, much care is necessary. She should be in good health, and not of a scrofulous, rheumatic, or consumptive habit. She should also be temperate and wakeful; free from any venereal taint in her system; nor should she have a child of her own to nurse. She should be cleanly in her person, and her milk should be as near the age of the child to be nursed as possible; but, if it vary, it should be younger rather than older. She should be willing to obey instructions as to the mode of dressing, attending, and nursing the child.

The practice of employing a wet nurse when the mother has sufficient nourishment for her child, is generally unwarrantable. But cases do occur in which the most tender-hearted mother must either employ a nurse, or feed her child; and when this

latter plan is resorted to, the food should be of cow's milk, diluted with warm water and lightly sweetened, so as to bring it as near as possible to the consistence and quality of breast milk. It should be prepared in the proportion of one third portion of water and two thirds of milk, for a young child; and to one five or six months old, the milk may be given without water; but in every case the milk should be sweetened a little, and the water warm. Home-made sugar is better than the imported brown, and this is better than the white.

For several reasons, it is better to use the bottle than the spoon for feeding; because there is not so much danger of overloading the stomach, since the child will always stop when it has taken enough, and there is a better opportunity for the saliva to mix with its food. It is also better, because the nurse is thus prevented from putting the food into her own mouth; which, if she uses tobacco in any form, would be injurious to the child. And, by this means, also, the child's clothes will be preserved dry and sweet.

We have been forcibly struck with the eagerness of nurses to improve the diet of children, by adding a little flour, or boiled bread, or some other article to it. Every addition of the kind, at least till the child has arrived at the age of five or six months, will certainly injure it. The nearer we can approach to nature in preparing nourishment for our children, the better. She designed that they should live on milk till they arrived at a certain age; and that age she designates by giving them teeth, to cut or masticate more solid food. After these manifestations appear, a little bread boiled in milk, rice well boiled, sago or arrow-root, may be added, though the diet must still be simple. It is too often the practice to give an infant a little of anything which the mother may be taking at the time. But although some children may be treated thus without a fatal result, it is always a triumph of nature over a bad practice. The vast number of cases of rickets, scrofula, consumption, *tabes mesentericus*, and a variety of other diseases, prevailing amongst the children of those who are unable to procure for them the proper kind of food, warns us against a departure from that course which nature has made essential to the safety and well-being of our children. HIPPOCRATES, *the Father of Physic*, saw and urged the necessity of adapting the diet to the age of the child. And a departure from this rule must always produce serious, and, not unfrequently, fatal results.

We may be asked, at what age a change in the diet may be

made? The question cannot be answered by naming any number of months or years; but the number of teeth the child may have will point out the period. If the first set of teeth be full, and the child is healthy, it may take some animal food; or even before they are all perfect, if its health be good. But the food should be easy of digestion, well cooked, but little given at a time, and that duly mixed with bread. And, when all its teeth are perfect, it may take animal food, well boiled or roasted, once a day, but not oftener. But in no case must it have more than the stomach can readily digest. Beef, mutton, or fowl, is better than veal, lamb, or pork; and the older animals, when properly fattened, are the easiest digested. "An excellent article of diet for children is made by cutting a piece of beef, or mutton, when underdone, and catching the red liquor. Boil this with a little mace or nutmeg, and thicken it with grated cracker," sweet light bread, or the crumbs of corn bread,—the last being the easiest of digestion. When children take animal food, it should always be on an empty stomach, that it may have all the advantage of the gastric fluid to aid in its digestion; and a sufficient time should be given for this to be digested, before it is allowed to take the breast, or other nourishment.

After six months, regular rules for feeding or nursing should be observed; and thus a regular digestion will be established, the child will be more quiet, the breasts will fill regularly with milk, and the mother will preserve her strength.

The child should be nursed the last thing before retiring to rest, and then, as seldom as possible during the night, especially in warm weather.

Bread, with sweet butter, and a little sugar spread on it, with sweet milk, is a good article of diet for children that are old enough to take it, as a lunch between meals. The potato is not a proper diet for children under a year old; and not even for those over that age, unless it be properly prepared. This should be done in the following manner: put it in cold water, which should be made to boil as quick as possible, and, as soon as the water boils, pour it all out, and cover the potatoes again with cold water. Let this boil three or four minutes, empty out all the water, and break the potatoes in your hands, between a towel; remove the rind, which is loose, and mash the pulp fine; add a little salt and new butter, and they are prepared for the child to eat. Potatoes, prepared in this way, may be given to children, in moderate portions, with impunity; and, for their

use, it is the best way of preparing them. Strong gravy, of any kind, mixed with children's food, is objectionable, it being difficult to digest.

We said, in another part of this chapter, that a child raised by hand should be nursed from a bottle; and we will now give a little additional advice on that subject. The *flat* bottle is the best, as it can be kept in the bed all night, and warmed by the heat of the body. But as soon as the milk becomes the least sour, the bottle should be emptied, well cleansed, and laid in clear cold water, till it is again needed. When the child sucks the bottle, it will not be apt to take too much; unless, indeed, it has been spoiled, by being frequently urged to do so. Be regular in the hours for feeding it, as well as in the quantities given and it will be likely to do well, as far as nursing is concerned.

#### OF THE NURSERY FOR CHILDREN.

It is a matter of no small importance, in towns and cities, to have a well-regulated nursery for children. And this, in a city, should be up stairs, in order to command a free circulation of air. Two rooms, with a communication between them, should be set apart for this purpose; and at least one of them should be large, having windows in such a situation that the air may circulate freely through both.

The fireplace should be constructed to burn wood or coal; for a stove should not be used, as it is liable to create too much dryness of the atmosphere; to obviate which, the nurse will probably heat water upon it, and the children, heedless of the danger, will be liable to be scalded. There are instances on record of children being scalded to death in this way. The fireplace should be guarded by an *iron* fender, which is better than *brass*, because it will not canker. It should also be high enough to prevent the children from reaching over it and touching the fire. The articles of furniture should be few and simple; the bedsteads low, with side-boards; and mattresses, made of curled shucks, moss, or hair, should be used, instead of feather-beds, especially during warm weather; and a few folds of soft blankets, over a mattress, would be better, even in winter, than feathers. If possible, not more than two children should sleep in one bed, and they should have room enough to roll over without interrupting each other. A nursery should have but few chairs in it; some of which should be low and small, for the children to sit on, when they choose to rest. These, with a wardrobe, or a bureau or



two, for their clothing, are all the furniture the room should contain.

There should be a woollen carpet on the floor, to secure the head of the child from injury, in case of its falling; and the children should wear their shoes, lest injury be done by any needles and pins that may have been dropped on the floor and partly concealed in the carpet. All possible care should be taken to keep the floor clean and pure; and while one room is swept and dusted, the children should be kept in the other, free from inhaling the dust.

There should be as many toys and playthings in the nursery as the children require for their amusement. Let them jump, run, and play, roll and tumble over the floor, at pleasure; for exercise gives strength to the muscles and activity to the mind. Let them sing and laugh; for this form of exercise strengthens the lungs, and improves greatly the general health. They should be put to bed early, and be accustomed to be left, for the night, in the dark. Nor will they, generally, be afraid of this, unless they have been frightened by foolish stories. They should not be allowed to form the habit of drinking after they are put to bed; and then, if they should call for water in the night, it will generally indicate that they are feverish. If they are allowed to drink freely, the bladder will be filled with urine, and they must be taken up frequently through the night, or they will contract the habit of wetting the bed. They should be taken up early, washed and dressed; and, if the weather is good, they should go into the open air, take free exercise, and have an early breakfast.

The doors and windows of a nursery should be closed in cold weather, and the windows should have slats in them, placed five inches apart, and set up and down, so that the child cannot climb upon them, and thus be in danger of falling out. If any of the doors open immediately at the head of the stairs, they should be secured by a double door, made with slats in the same way, that the child cannot climb on or over it; and the catch should fasten by a spring on the opposite side. No sharp or pointed instruments should be allowed, under any circumstances, in the nursery.

When the children are large enough to use them, give them slates and pencils with which to amuse themselves by making marks and figures; and by this means, useful improvement may be connected with their hours of play.

The principle of love and benevolence should always be cul-



tivated in their minds. They should never be allowed to get angry, and fret, and pout, and cherish a grudge against each other. As soon as anything of this kind is discovered, the faulty one should be made sensible of its wrong, by mild means, and induced to acknowledge its fault to the other; who should be taught, in its turn, to forgive the offender. The endearing appellation of brother and sister should be early put into their mouths, and they should be taught to use it on all occasions. They should also be taught to speak to and of their parents with reverence, and to yield obedience to them at all times and in all places. And parents and nurses, on their part, should never fly into a passion with their children, as this betrays weakness which will always be remarked, and the effect of which must be injurious. A child should not, on any account, be punished till it is made sensible of its fault; and this should always be done in a kind and gentle manner. Let it be first convinced that it *deserves* chastisement, and that the father or mother takes no pleasure in its infliction, but is rather pained thereby. Never let a child be indulged in what has been once forbidden; neither must it ever suppose that its parents can speak anything but the truth.

In good weather, children should be sent out to take the air frequently, especially in the morning and evening; but they should not be kept out in the sunshine long enough to heat them. Many of these directions will not apply to the country, where children always have the privilege of pure air; but so far as they do apply, parents will find it profitable, both to themselves and their children, to put them into practice.

A few words on the subject of dress. Children should not be clothed in winter in such articles as will readily take fire; and for this purpose, woollen will be found to make the best dress. In summer, all their clothes should be made loose and short; and sufficiently so, in all seasons, to give them free play with their limbs and the power of expanding the chest freely. The stomach and abdomen should not be bound tightly, lest the powers of digestion be impaired.

Infants should not be carried out in the chilling weather of winter, spring, or fall, with naked arms and legs. They cannot remonstrate against this practice; but colds, pleurisies, bronchitis, and fever, will be the almost unavoidable result. As a father and friend, then, let us caution you against carrying your chil-

dren out in this situation, or allowing the nurse to subject them to this unfeeling exposure.

#### OF THE SLEEP OF INFANTS.

In the early stage of life, the gastric, arterial, and absorbent powers are much employed for the purposes of digestion, of secretion, of deposition and growth. Consequently, much excitability is required, and a state of quiescence, or sleep, is most favorable to the development of the different functions above named; and, therefore, nature has wisely ordered that an infant should sleep the greater part of its time. Indeed, it would seem that the waking moments of infants are only exceptions to a state of constant sleep; and the more an infant sleeps, naturally, the better. Though the excitability of the system is certainly accumulated in a greater degree in a sleeping than in a waking state, yet this superabundance of excitability had better be exhausted by crying, than to allow the system to lack anything in the important matter of developing its powers and functions. Sleep, therefore, is the natural and healthy state of infants.

The organs of hearing are not acute in early infancy, and this is a wise arrangement of nature, as children are, by means of it, not prevented from sleep by noise. Nor should this natural order of things ever be changed. The nursery should never be made entirely noiseless, but the child should rather be accustomed to fall asleep while surrounded by its usual noise, as it will then not be interrupted by it. The child will sleep better, longer, and sounder, and the mother or nurse will not be disturbed by its sudden shrieks when awaked by every little noise it may hear. If the habit of keeping still has been established in the nursery while the child sleeps, the sooner it is broken up the better. The child may resist it for a short time, but will soon yield, and sleep soundly, though there may be noise around it.

#### OF FASHION, EXPOSURE, HARDENING, ETC., OF INFANTS.

Fashion has ever exerted a baneful influence over the finest and best feelings of our nature, and even the mother has become willing to sacrifice the health and well-being of her offspring at its shrine. The child, in obedience to its dictates, must be dressed, even in winter, in short sleeves,—its arm naked above the elbows, its legs and head very lightly covered, if not entirely bare; and, in these habiliments, the child is exposed, till its skin

becomes blue, its lips tremulous, and its breathing slow and labored. And though the mother or nurse may deem it a matter of no importance, a few hours will generally serve to develop the injury which the child has thus received. It is soon attacked with bronchitis, inflammation of the lungs, or some other form of inflammatory fever, which, in a few days, may prove fatal. And this is one of the fruits of fashion. We will show the connection between the cause and effect here stated, and anatomical demonstration will, perhaps, throw a light on this subject. *Dr. Portal*, in a dissertation on this subject, shows with much clearness the connection between the arms and lungs, by means of the cellular membrane proceeding from the upper parts of these organs. He says: "After passing under the cellular membrane and accompanying the blood-vessels and nerves under the arms, they penetrate the glands in the armpits. The spaces between the shoulder-blades and the ribs are occupied by this tissue; so are the spaces between the muscles of the breast and backbone, under which it passes and extends itself to other muscles of the back and breast. This free and prompt communication is found to exist by injecting the parts." If the anatomist can inject into the air-cells of the lungs water which will pass from cell to cell, until it arrives at the external part of the breast, proceeding thence, under the armpit, and thence to the arms and sides of the chest, it may be reversed by making water pass from the armpit to the lungs. From these facts, the deduction is clear, that whatever does an injury to the upper part of the arms or armpits, will be felt by the lungs, and hence the injury that will necessarily arise from exposing the arms to the action of cold. In every instance of the kind, we may certainly look for the lungs to be affected by inflammation or congestion.

The only rule by which parents can be safely governed in this matter is, to adapt the clothing of the children to the temperature of the air, no matter what the season of the year. And surely a child may live in a pure air without being exposed to the extremes of cold. The air in winter is as pure in a well-constructed house as it is abroad, and is, moreover, as well adapted to health. Let us, however, admit that there might be an advantage in exposing a child to what such persons consider *fresh air*, in winter or cold weather,—will they not concede that such a process requires much care? Will it not be necessary that the child's body should be carefully and sufficiently protected? Every sensible woman must admit that, if attention be

not paid to these things, great danger may be incurred. If, then, these points be yielded, as they certainly must, we ask if one mother in a hundred has a confidential servant or nurse to take the child abroad and attend to these things as their importance demands? We are sure that many will say, yes, because they believe they have. Yet, any one who traverses the streets of a town or city, will soon see that the mother's confidence in her nurse is often betrayed, as the exposure of the limbs of the little sufferer until they are purple with cold will sufficiently attest. He will see that the nurse is attentive only to the gratification of her own desires; and is sometimes engaged in holding a gossip with an acquaintance; at other times, standing and gazing into the window of a paint-shop, or confectionary, apparently unconscious that the infant is shivering with cold, until she begins to feel a little chilly herself; when she returns home,—not, however, until it is nearly benumbed with cold. The mother receives her child with rapture; and, because it has been breathing an atmosphere a little above zero, perhaps for two or three hours, she anticipates for it future health, from the very cause that must end in its suffering, and, perhaps, death; for a course more certainly destructive could scarcely be adopted.

Will it be said that “the children of the poor are more hardy and healthy than those of the rich,” while, at the same time, they are exposed to the inclemency of the seasons? Let the bills of mortality decide this question. And they assure us, that a large majority of children that die in infancy are those of the poorer class; and every physician of experience will confirm this statement. Cold, when combined with the unavoidable privations of poverty, exerts a most destructive influence on the constitution of the infant, desolating without stint, and making more victims than any one disease in the whole catalogue of human maladies. *Adam Smith* confirms this representation when he says, “It is not uncommon in the highlands of Scotland for a woman, who has borne twenty children, not to have three alive at the same time.” The British officers, instead of recruiting their regiments from the children born in the army, have not been able even to supply them with drummers out of all the children born there. (*See Wealth of Nations*, vol. 1, page 105.)

In thus attempting to point out the evils of improper exposure, we would not be understood to favor the opposite extreme; we deprecate overweening caution as earnestly as we do imprudent exposure. Cold air is unquestionably a cold bath, with certain



modifications; but no mother would think of giving a child a cold bath in the nursery, at the temperature to which she exposes it by sending it out in the cold to take an airing. The same temperature does not suit every constitution, and not even the same constitution at all times. We agree that children may be brought up too tenderly; and this is equally as improper as to expose them too much, and has made its victims, too. But extremes, either way, should be avoided.

On a subject of this kind it is impossible to lay down precise rules to suit every case. We can only give general directions, and must leave the rest to the good sense of the mother, who will not vary far from the proper course, if she permits that, instead of fashion, to guide her. Let her reflect on these things as seriously as their importance demands, remembering that the lungs of an infant cannot bear as cold a temperature as those of an older child or an adult.

The bad effect of cold air on a child's lungs is not felt instantly on being exposed to it, but after it has been brought to the fire, and reaction has taken place. It should, therefore, never be taken out of the cold air, suddenly, into a heated room. But what is the practice in reference to this? A child sent out on a cool evening, to take the fresh air, is brought back with its face and lips blue with cold. The mother takes it near the fire, where it presently falls asleep. It is then put to bed; and, in the morning, awakes, hoarse, feverish, and fretful. The conclusion is, that it has taken cold, though no one can tell how; and the room is supposed to have been kept too warm. It is sent out again, however, to take the fresh air, and to make another trial of the strength of its lungs and constitution. They are now speedily inflamed; pneumonia, pleurisy, bronchitis, or catarrh, attacks the child, and the presence of the doctor is required. But no account can be given of the cause of this disease; and he, perhaps, through ignorance or timidity, refers it to the changes of the weather, and says the disease is epidemic. It would be strange if it were not; for the *fashion* is epidemic, and the *disease* is its result. But in such cases, the remedy comes too late and the death of the infant is regarded as a wonderful visitation of Providence, when it is only the result of parental imprudence, in what is called "*hardening the child.*" Let mothers, then, think of these things, and be more watchful over their nurses, who frequently pretend twenty times as much love



and tenderness for the child committed to their care, as they really feel.

The best way to "harden the child" is, to dress it warmly, in cold weather. Let the skirts of the dress be long enough to cover its feet and legs in any position; the sleeves sufficiently long to cover the arms and hands, regardless of all "fashion," save that of keeping the child comfortable. A cap and stockings should also be worn in cold weather; nor should it ever be sent out for an airing when sufficiently cold for frost. It should, indeed, never be exposed to a temperature below forty-five degrees.

An infant should be washed every night with water nearly blood warm, and rubbed well with a towel and the hand; it should be fed regularly, and with food proportioned to its age; put to bed early, taken up early, and allowed to kick and play as much as it pleases. Let it breathe a pure, healthy atmosphere, of a proper temperature, and keep its bowels in good order, and it will grow, keep well, have a good constitution, be lively, have better sense, and prove a greater blessing to its parents and society. And this is the *true* method of "hardening children." Try it, and see its results.

In closing our remarks on this subject, we quote the following dialogue, from a celebrated author:

"A lady, who was a great stickler for hardening her children, told the doctor, with an air of triumph, that the plan she had adopted in sending out her children, would, at once, be an answer to all his objections to the practice. Her plan was as follows: 'When the weather is cold,—and that is the time you object to a child's being carried out,—I take care not only to clothe my child very well, but also, before the nurse sets out, to cover its little head completely with a good warm cloak, so that the cold air cannot get to its mouth. It will sleep, when it is thus covered up, as soundly as if it were in its cradle in the nursery. So you see that no possible injury can happen to the child, since it is not made to breathe the cold air, which you appear so much to dread.' We admit this prevented the child from breathing the cold air. But it created an objection as strong as the one it was intended to remove; for it caused it to breathe a heated and impure air, generated by its own lungs, and, consequently, the design to be accomplished by sending it abroad was entirely defeated. We asked this lady how she would like to place a child in the yard, after carefully wrapping

it up in the crib, that it might enjoy a nap in the open air? This, she declared, would be highly dangerous, and she could never think of running such a risk. We then asked her in what this plan differed from her own. She became much puzzled, and could only defend her plan by saying that, according to her method, the child had the advantage of exercise, which the other had not. We then appealed to her candor, and asked if the child was more passive in the cradle than it was in the nurse's arms?

"At another time, we were speaking with a lady who had lost three or four children by croup. She informed us that she was convinced, from experiment, there was nothing like exposure to all kinds of weather, to protect and harden the system. By pursuing her first plan, in managing her children, she lost several with croup; but, since she had adopted the opposite scheme, her children had been perfectly healthy, and never had betrayed the slightest disposition to the disease which had robbed her of her other children. We observed to her, 'Madam, perhaps, in making your first experiments, you attended to a number of details, which might be thought essential to the plan. You, perhaps, did not take the proper precaution when you sent them into the cold air, or failed to observe what was important when they returned from it.' 'Oh, yes,—I took every possible care. When they were going out, I always made them wear a great-coat, well lined with baize, and a fur cap, or collar. They always wore a comfortable, made of soft woollen yarn, around their necks; their feet were always protected by socks, or overshoes, lined with fur or wool, as the weather might be wet or dry.' We then inquired of her: 'Do you believe they were kept at a proper degree of warmth by all these things?' 'Oh, certainly; rather too warm, for they would often be in a state of perspiration when in the open air, especially when they ran, slid, or skated.' 'And what was done when they were thus heated?' 'Oh! they got cool enough, before they got home.' 'And would they receive no injury in passing from this state of perspiration to that of chill?' 'Not at all; for, when this happened, I always made them take a little warm toddy, or wine and water, and made them toast their feet well by the fire.' 'Did they sleep in a cold or warm room?' 'In a warm room; a good fire was always made in the stove before they went to bed, which kept them quite warm all night.' 'Would they never complain of being cold, towards morning, when the stove

had become cold?' 'Yes, constantly; but then there were always additional bedclothes at hand, with which they could cover themselves.' 'And did they always do so?' 'Oh, I suppose so.' Let mothers take notice, that, under this plan, this lady lost several children with croup. 'Well, madam, how did you carry your second plan into execution; which, you say, was attended with such happy results?' 'I began by not letting them put on their greatcoats, but when the weather was so cold as to require this additional clothing. I did not permit them to wear a comfortable or fur around their necks. I took away their overshoes; and if their feet chanced to get wet, their shoes were immediately changed, if they were at home. If the weather was wet, or unusually cold, they were permitted to wear their greatcoats; but not else. If they came home very cold, they were not allowed to approach the fire too soon. I gave them no warm, heating drinks, and accustomed them to sleep in rooms without fire.' — *Dewees*.

Let mothers read this second plan over again, and they will see embodied in it a fund of good sense, and a plan for the enjoyment of air and exercise for their children, as judiciously arranged, as far as it goes, as any course of physical education can be. We trust they will profit by this lady's experience, and learn from her a lesson not soon to be forgotten.

#### OF THE PERIOD OF WEANING THE CHILD.

When the child arrives at a certain age, it is generally taken from the breast, and this is called weaning. This is a period of much anxiety to the mother, and shows plainly the pleasure she has had in suckling her child.

Some mothers determine upon the period of weaning from the age of the child. It is, however, a bad rule, and has, for its confirmation as such, thousands of victims. The propriety of weaning a child depends upon a variety of circumstances, and no definite time can be named, at which that process should take place. It is dependent, altogether, on the circumstances of the case, and these circumstances are connected with the mother, the child, and the season of the year.

Various causes may conspire on the part of the mother, which may render weaning necessary, both for her health and that of the child. *First*. Her general health may be so impaired, from some constitutional disease,—as consumption, king's evil, scrof-

ula, dyspepsia, &c.,—as to make it important for her safety to wean the child.

*Secondly.* She may be attacked with some active disease, as fever, local inflammation, especially in the breasts, the loss of her nipples, or any other cause that can seriously affect her milk; and this may continue long enough to injure the child materially. We would remark here, however, that the mother who labors under any form of fever whatever can suckle her child; and although she may receive an injury by so doing, the child may remain unaffected.

*Thirdly.* The mother may not be able to afford a sufficient quantity of milk; what she has may be deficient in quality, and thus even this small quantity may prove injurious both to mother and child. Under such circumstances, it should always be weaned.

By these rules or remarks, we design to convey the idea that, when anything occurs on the part of the mother which would prove detrimental to her health or safety, in case of her suckling her child; and when its condition is such as to insure as much safety for it as benefit to the mother, or even not so much, in such a case she should, by all means, wean it, even though the child be injured by it. For it is better that the child suffer than that the mother die, though we should save both if possible.

*Fourthly.* The mother may become pregnant while she is suckling; and this, with some, is an unwavering call to wean the child; which, however, is not always right. We have known many ladies who have become pregnant, and continued to give suck to their children for months; and both mother and child did well. We have, indeed, known some ladies,—and other authors furnish many such cases,—who have continued to give suck till another child was born, and this without injury to mother or child. These cases are, however, comparatively rare.

The only rule that should govern the mother as to the time of weaning, is furnished by the affirmative answer to these questions: Is your milk healthy? Do you furnish a sufficient quantity for your child? If so, the child may suck till it is at least a year old. But when the milk becomes thin and poor, and deficient in quantity, and the mother is failing in strength daily, the child should be weaned, if it be well, although it is only six months old. When the milk disagrees with the child, it will eject it from the stomach, when it will be curdled or very thin,



and smell badly; and, in this case, it will disorder the child's bowels.

We have considered this subject in relation to the mother, and now continue it in reference to the child. Supposing the mother to be healthy, there is nothing on her part that makes it necessary to wean the child. Different authors have decided on various periods for weaning children; some say at the age of six months, and others nine or twelve months. Our own opinion is, that no age can be given. We consider it the best of all rules to follow nature, when she is not thwarted by art or disease. Let us, therefore, ascertain her language on this subject.

At a certain period, earlier or later, she supplies the infant with teeth, the manifest design of which is to cut and masticate food. This tells us, in stronger language than any physiologist can command, that the stomach of the infant is prepared to digest stronger food than breast milk. Such food should, therefore, be selected, as will best suit its strengthened condition; of which, however, the quantity should be small. If one child cut four, six, or eight teeth, at the age of six, eight, or ten months, and another child the same number at the age of ten, twelve, or fourteen months, the stomach of the first will digest animal or vegetable food that number of months earlier than the latter. If this fact be kept in view, the mother will not materially err as to the first rule.

Again; we lay it down as an invariable rule, which observation will attest, that a child should never be weaned while it is sick. And we give the following reasons: *First*, because milk is more easily digested than any food that can be prepared for it. *Secondly*, it never disagrees with any medicine which a child may take. *Thirdly*, there is no plan that can be adopted by which nourishment can be so easily conveyed into the stomach as by sucking it from the breast. *Fourthly*, when children voluntarily wean themselves, while sick, they rarely do as well as when they continue to suck. *Fifth*, breast milk will frequently restore a child to health, when all medicine and artificial feeding fail; and, therefore, we say, never wean a child when it is sick.

Further, it is a matter of common observation, that the season of the year has more or less influence on children undergoing the process of weaning. And for this reason we should, all things else being equal, select the most temperate months, namely, April, May, October, and November, as the most favorable. In these,



the nights are not so long as in some others; and a long night passed with a child undergoing the process of weaning, is extremely trying to the mother. In cold weather it is apt to suffer if it sleeps apart from its mother; but in the months just named, both these evils may be avoided. When the time for weaning is determined upon, it should be gradually prepared for the change by being allowed a little solid food, according to the rules laid down on feeding. A little bread and butter, with sugar on it, may be given once or twice a day for some days, and then increased in amount, adding, too, a small portion of animal food. Give it the breast less frequently, and allow it to take less at a time; and, by this course, it will soon be entirely weaned.

As soon as they can reach out the hand, children are pleased with anything that is smooth or shining, and quickly carry it to their mouths; and, by taking advantage of this disposition, they may readily be taught to take water, milk, &c., out of a cup or spoon. Glass or china should not be given to them when cutting front teeth, as they will bite its edge, and thus produce an unpleasant sensation; for which reason, they will refuse it for a long time afterwards, thus making it troublesome to feed them. Metal will serve a much better purpose. When the child is accustomed to eat gradually, take the breast from it; and, by day and night, be careful to adhere strictly to the whole process of weaning, as here laid down, never varying from it, unless the child be taken suddenly sick. By exciting disgust in the child for the breast, by means of something bitter applied to the nipples, or something unsightly placed over them, but little trouble will be experienced in weaning it. A solution of aloes, soot-tea, or any bitter substance, will have this effect; or a piece of black court-plaster placed over the breast. Filling the bosom with wool, covering the breast with the skin of a small animal, as a squirrel, or rabbit, or anything else that it may dislike, will frequently cause the child to wean itself, and thus spare much trouble. Food should always be kept prepared for the child, which should be given to it when it becomes disgusted with the taste or appearance of the breast; and by this means it will soon prefer the food to the breast. There is much benefit derived from this course, as it saves the child from crying or fretting, which sometimes produces fever.

While the process of weaning is going on, the mother should not forget to attend to her breasts; and if the milk secretes freely, they should be drawn partially, once or twice a day, for a few

days. At the same time, she should live on dry food, and anoin the breasts with the following liniment three or four times a day :

*Recipe* : Spirits Camphor,  
Laudanum,  
Sweet Oil,— of each half an ounce.

Mix in equal parts, and shake well together. Spirits of camphor alone will do much good ; or horse-mint, stewed in vinegar, may be applied daily over the breast and under the arms, for a few days. If feverish, she should take a dose of salts, senna tea, or castor-oil, and be careful to avoid all fatiguing exercise.

OF FOOD PROPER FOR CHILDREN AFTER WEANING AND UNTIL THEY CUT THEIR SECOND TEETH.

We have in another chapter laid down several rules for dieting children before and at the time of weaning ; and we now proceed to speak of the diet proper for them from this period to that of their second dentition, or cutting a full set of teeth. This we may well consider a subject of sufficient importance for a distinct chapter, when we take into consideration the variety of diseases to which children are subject at this period, and are satisfied, at the same time, that many of these diseases are brought on by improper diet.

Notwithstanding an important change has taken place in the process of the first dentition, yet there is one equally if not more important to follow. The digestive organs are yet weak, the system tender and irritable, and every deviation from the strict rules of propriety, in diet, is liable to derange the stomach and lay the foundation for disease. It therefore becomes our duty to inform ourselves on this subject.

A diet principally vegetable should be used till the child is two years old, though it may occasionally take a small portion of light meats, such as fresh beef, mutton, lamb, fresh fish, &c. Boiled fish is more easily digested than fried ; veal, or pork, or the flesh of ducks and geese, is not easily digested, and should not be given to children. All salted and cured meats are objectionable, for the same reasons, and, therefore, should be given very sparingly. Fresh venison, and indeed all wild game, is easily digested.

Children should not be allowed to take animal food oftener than once a day, and then it should be well cooked, made fine, and taken with a moderate quantity of vegetables, and never without bread. Much pastry is highly objectionable ; and after

all that is or can be said on this subject, milk and bread, with a little sweet butter, form the best diet for children. To this may be added, rice, sago, light soups, soft boiled eggs, custards, bread puddings, mush and molasses, well-cooked potatoes, cymplings, &c. The parent should always judge of the quantity the child should eat; and nothing is more pernicious than to allow it to have a little of anything it may see on the table. Highly seasoned meats, stews, cutlets, and fricassees, should be avoided, as well as rich dressings of every kind; for they are indigestible, and may produce cholera morbus or fever. Milk, or coffee well diluted with milk, lightly sweetened, together with bread and butter, make the best breakfast and supper for children. As they grow older, they should be taught to eat anything that is common, so that they may feed themselves easily at a table furnished with any article of diet in common use. Small children should not be indulged in eating candies, ice-creams, &c., nor in using ice in their milk or water, nor in eating confectionary, or unripe fruits of any kind, for they are all indigestible, and are apt to produce sickness. Nor should they ever be allowed to drink spirits of any kind, or in any form. If the parent never tastes a drop in the presence of a child, it will not wish to taste it. Thousands of drunkards have been made by giving the child a sweetened dram in the morning, or a tansey dram to kill the worms. The motto of the parent should be: "*Touch not—taste not—handle not*" the poisonous drug; and the countless evils which it brings with it will thus certainly be avoided.

## OF THE CONSTITUTION OF INFANTS.

Whether we regard the helplessness of the earliest spring-time of life, or reflect on the comparative mortality of childhood, the study of infantile pathology is replete with tender interest and instruction. When the physiologist begins to explain the phenomena of organic life, he should select the animal in which the organization is the most simple. For this reason, "the constitutions of young children are the most favorable for the study of disease," because usually marked by greater simplicity, and unmodified by alarm as to the result of their disease. They are not acted upon by sexual influence, by mental emotions, or disquietude; nor are their minds influenced by the changes resulting from the wear and tear of body. Children are also unaffected by the alterations of structure produced by repeated and complicated disease. Acute attacks in them, if not arrested

very soon, disorganize and change the normal condition of **some** important organs; thus forming what is called a weak or delicate point, which becomes in after life the seat of disease. There is a greater uniformity in the diseases of children than in those of adults; their pathology being uncomplicated, the system of the child is capable of constant modification. It is often in our power to mould and modify the body; to impart to it that degree of perfection, at which the standard of health, as well as the requisites of beauty, are to be found; and at this period of life there is a predisposition to disease, in an imminent degree, which arises from the peculiarity of infantile physiology and the sudden changes of condition which the vascular and nervous systems are undergoing. The heart is soft, possessing but little power, and is extremely irritable; its left or arterial side is, relatively, of large size, and the course of circulation is undergoing a metamorphosis in the *foramen ovale*, the *arterial* and *venous ducts*, and the *umbilical* and *portal veins*. Corresponding with this, we notice the extreme celerity of the pulse and breathing,—the infant pulse varying from one hundred to one hundred and ten strokes, and the breathing about thirty-five times in a minute; while, in the adult, the healthy pulse is about seventy-five strokes, and the breathing from eighteen to twenty-four times in a minute. The bright pink hue or blush of the skin, in infants, is an evidence of their excitability. The brain and ganglionic masses are large in infancy, and the nervous system highly impressible,—a property constantly illustrated by the facility with which crying and laughing are excited, and the rapidity with which depression and exhaustion take place. As life advances, the cerebro-spinal system predominates, and diseases of irritation are more characterized by tetanic convulsions. From these peculiarities we may explain the very sudden changes in infantile diseases; “the rapidity with which the tenacious mucus is formed into a substance so much resembling a membrane, in croup;” and the almost instantaneous effusions which take place in the serous cavities. The majority of infantile diseases bear an inflammatory character, in a certain degree.

Children are seldom attacked with neuralgia, or pain in the nerves. The cause of their pains may, in a large proportion of cases, be traced to some offending matter in the stomach or bowels; for the mucous membranes are the first to take on an excessive action. There are, however, no membranes so vigilant in their own cure as these; for when diseased, they readily and



rapidly pour out an abundant secretion of mucus; so that in slight cases our interference is scarcely called for. The copious secretion of mucus from these surfaces would seem to tell us that nature is acting on the defensive, and that these discharges are salutary in keeping down inflammation. The liver, the pancreatic gland, the salivary glands, the mucous glands of the bowels, all come to the aid of the system, in this important work. Some of the most severe infantile disorders are those which are symptomatic, or secondary, as affections of the head in whooping-cough; inflammation of the air-vessels of the lungs in bronchitis; pneumonia, or inflammation of the substance of the lungs; the various effects of scarlet fever, and diseases of the chest from measles. All diseases of infants are modified by hereditary taint, in cases where any such taint exists.

In addition to the natural causes of disease, the system is exposed to the influence of external agents, the vicissitudes of temperature, &c. There is suddenly imposed on the alimentary canal the duty of assimilating the food taken in for the nourishment of the system; and the tender infantile system cannot be acted on by these influences with impunity. Many, very many children, die in the first year of their lives, from exposure to cold air; for their power of generating heat is extremely limited. All establishments for the cure of infants,—such as hospitals, infirmaries, &c.,—as well as the daily observation of all physicians, furnish evidence in proof of this fact. Thus we see, that the digestive functions are not always adequate to the task they are called on to perform. Aliment does not always, on its introduction into the stomach, prove congenial to it; as the early process of digestion seems to be a struggle between the stomach and the aliment it receives.

Another cause of disease in early infancy is, the retention of the meconium, or first passages. Nature, however, always true to her trust, when not interrupted by art, has given to the first milk secreted a quality capable of carrying off the passages; but, if there be any interrupting cause, a portion of this matter may be retained, and, adhering to the coats of the bowels, become an irritant, and prevent the operation of the nutritious quality of the milk; thus causing griping pains, and, if not removed, eventually, perhaps, producing death. Hence, the interference of art is sometimes necessary; and some gentle medicine must be given, to remove the offending cause.

The process of teething is often accompanied with a variety



of morbid effects, sometimes causing death, particularly while cutting the *first* or *milk teeth*, as they are called. Teething may be considered detrimental in the ratio of integrity or derangement of the functions, especially of the stomach and bowels; all of which is natural to the peculiarity of the constitution of the infant. When the system is deranged, this process will appear under signs of an unhealthy aspect. When a strumous condition of the system is manifest by external signs, such as a deficiency of ossification of the bones of the head, or enlarged ends of the long bones, or disease of the spine, or chronic hydrocephalus, or water in the brain,—some general excitement is always produced, in a greater or less degree, by teething,—and where any of the above causes exist, the case will present symptoms more or less unfavorable. If the child be unhealthy, the fever will assume either an intermittent or a remittent form. It may fix on some particular organ, peculiarly disposed, and thus produce inflammation of some kind; the most frequent form of which is that of the brain, or venous congestion, terminating in partial paralysis, convulsion, or dropsy of the brain. Nature is always trying to relieve herself; and, in these cases, her remedy is a drivelling from the mouth, a diarrhœa, or an eruption on the skin. The two latter, when immoderate, constitute, of themselves, disease; but when they are moderate, they act as a preventive of fatal disease.

An inquiry into the morbid influence of teething, especially as it regards the question of its primary action on the bowels or brain, is a most interesting one. The functions of these organs are often simultaneously affected; they are, however, not always dependent on each other; for the brain may, in some cases be the seat of disease, and the bowels remain but little affected. But, in severe affections of the bowels, the brain will always, sooner or later, participate. Convulsions,—so prominent a symptom in the disease of infants, and so frequently the precursor of death,—point us forcibly to the study of cerebral pathology, in the diseases of children. The question of the original location or point of origin of these convulsions, is not easily answered. They may be produced by too much fulness, or by debility; and hence, we see them where the bowels are too loose, as well as where they are constipated. They may be produced through the immediate influence of the nerves of the teeth, or some other nerves; or inflammation may be occasioned by too great fulness of the veins leading from the sinuses, and

terminating in effusion. Mesenteric tumors will soon produce a copious secretion of urine, from an obstruction of blood in the large venous trunks. We leave these questions as matters of reflection to the reader, and point to the pathology of the brain as the most important in regard to teething, as it is, indeed, in all the acute diseases of childhood.

#### THE EXTERNAL SIGNS OF INTERNAL DISEASE.

Fortunately, both for the parent and the physician, there are certain signs by which our remedies may be successfully directed in the cure of disease. The rallying power of infants is so great that we can, with no small degree of confidence, enter upon the treatment of their cases, hopefully expecting a cure. The healthy body of an infant is always in a state of renovation and increase; and the constitution itself often performs apparent miracles, even at the point of collapse, if the acute symptoms are removed. We should carefully watch the first buddings of infantine disease; and, although this important point is often overlooked or concealed, yet there is one,—if our visions were sufficiently acute to discern it,—at which the disease might be arrested. The signs of incipient disease are not common to most observers, and are, therefore, often neglected; and sometimes they are so insidious that the most acute observer may fail to perceive them. We shall notice some of these external signs, because they point to internal disease.

The saffron tinge of the skin, the white of the eye, or the urine, denote a derangement of the liver; anasarcus indicates a diseased function of the liver, or mesenteric glands; a livid complexion points out a cachectic, and glandular tumors show a strumous state of the system. A wasting of the flesh, with a tumid belly, shows that the child is in a state of marasmus, and also of venous congestion, from a pressure on the vascular trunks. By bearing these signs in mind, the mother will be able to know under what form of disease the child is laboring.

We now proceed to point out those symptoms which are more obscure. Grown persons can tell the seat of pain, and describe their feelings; but children cannot communicate to us in this way. Nature, however, is an unerring guide to truth, and she has a language which all can speak and understand. The moan or cry of pain, the expression of the features, the attitude and action of the body and limbs, will often be, if skilfully inter-

puted, a more certain guide to the true character of the disease than the doubtful meaning of words. As the expression of the features is the index of the mind, so does it present the earliest indications of unhealthy changes in the system. The pupil or sight of the eye, in a healthy infant, is usually dilated a little, and its alterations are very frequent; and when the dilatation or contraction is permanent, it becomes a matter of more importance. If accompanied by a livid hue or flaccid condition of the face, it is often an indication of effusion in the brain. In the progress of hooping-cough, the eye should be attentively regarded. While the disease is confined to the organs of breathing, it will be little affected, except by redness produced by a paroxysm of coughing; and we may very certainly decide if the brain is about to participate, by the fixed contraction or dilatation of the pupil. A squinting suddenly taking place, in connection with other symptoms, though it may be produced by worms in the stomach, or the rays of light constantly falling on the eye from one direction; the contraction of the pupil of the eye to a small point, with the lid half closed, and the white of the eye streaked with red; a frowning, or knitting of the brows, with spasms of the ball of the eye, mark the condition which has terminated in inflammation of some of the membranes of the brain, or will soon do so. Spasms of the eyeballs generally indicate inflammation of the arachnoid membrane, in the base of the brain, which is a dangerous symptom. It may be remarked, however, that, during the sleep of an infant in health, the pupil often becomes closely contracted, and rapidly dilates when the eye is opened. When the eyeball is fixed, and drawn up under the eyelid, the pupil widely dilating and contracting, the eye looking bright and glossy, we may expect convulsions or epilepsy, if these symptoms are not speedily removed. If, on exposure to light, the apparent effect is not produced on both eyes, one pupil being fixed and the other contracting, the child may be considered in great danger. A sinking of the globe of the eye, its orbital circle becoming dark, is the effect of rapid absorption, and is soon followed by extreme prostration.

Any peculiar movement about the nose, or lips indicates disorder of the chest or abdomen; and if there be any impediment to the transmission of air through the lungs, the nose will be drawn in during respiration. If the mouth be kept open in an unusual manner, and the lips puckered and of a livid hue, when the nose and upper lip are tumefied, these are signs which indicate

irritation of the bowels, as from worms, or a loaded condition of them, with a redundance of mucus, &c. If the inside of the nose be dry, and the lips pale and cracked, attention should be paid immediately to the condition of the head; and when we see frequent spasms of the lower jaw, we may anticipate that the base of the brain is threatened, and the case should receive immediate attention. *The motion of the limbs is an external sign of internal disease.* Children in health move their limbs indiscriminately, seldom employing any exclusive action. They will spring, kick, roll, move the arms, crawl and tumble about, in all the varieties of antic display; and these motions are readily recognized, and gladly hailed by mothers as signs of health and vigor. But when we consider their movements as a series of symptoms, we must take a different view of the case. The part unusually active is rarely the seat of the disease; but such actions are, generally, the result of remote sympathy. If any particular movement be observed, it will be found, on close examination, to correspond with the extent of disease in some other, and perhaps remote, part of the system. In infancy, for instance, there is often a doubling up of the body, to relieve tension; and when inflammation exists in the lower bowels, the legs are forcibly drawn up towards the belly. If, however, one limb be violently moved, it may be the seat of pain.

There are two conditions of the limbs that indicate disease. *First*, an excess of action amounting to spasm; and, *second*, a loss of power; palsy depending on a peculiar irritation of the nervous system, from a variety of causes. The simplest form of spasm is manifested by starting in sleep; and as early as the fifth or sixth day, infants will be attacked with spasms of the muscles of the face, lower jaw, or neck, and, in severe cases, the lower jaw becomes fixed. This form of spasm in infants is frequently produced by retained meconium, or extending ulceration of the umbilical cord. Convulsions may be produced by painful dentition, and, when this is the case, they are preceded by swelling of the backs of the hand and tops of the feet.

There are other causes for convulsions, such as acidity of the stomach and the making of an effort by the system to throw an eruption on the surface. In these cases, the lungs are often rigidly distended, but yield when the eruption appears. A contraction of the fingers and toes is an evidence of severe convulsions. And there is a species of disease of the brain, marked by a drawing back of the head, and attended by a



crowling noise. Palsy, which is the reverse of this, and is **most** frequent in children of a lax and feeble frame, is usually accompanied by wasting and coldness of the limbs; it may occur during teething from gastric irritation, or at the decline of fever; and *partial* palsy is not unusual during teething. The limb affected by this form of palsy will ultimately regain its strength. Hemiplegia and paraplegia are dependent on more important causes in the brain and spinal marrow. In older children, an uplifted step or staggering gait, and a rocking of the legs, often indicate that species of dropsy of the brain which occurs without fever or acute disease; and if the child moves much from side to side the spinal marrow is usually affected.

#### THE LANGUAGE OF COMPLAINT DURING PAIN.

The expression of complaint by mere simple sounds may be a voluntary, natural effort to relieve, or it may be involuntary, depending on morbid changes in the organs of respiration, as the whistling in croup.

Weeping, though sometimes an indication of severe pain, is also an involuntary mode of relief. The first natural effort of an infant is crying, and by this means the air-cells of the lungs are distended and a free circulation ensues. In the system of the child, an excited condition, or an accumulated irritability, often occurs, for the dissipation of which, crying, laughing, or free exercise, is absolutely necessary. As, in the adult, the suppression of grief and tears is often deleterious, so, in the infant, congestions would more frequently occur were it not for this mode of relief.

An infant will never fret unless it be uneasy; and fretting may be the mere sensation of fatigue, as sleep is usually preceded by it, or it may arise from mechanical irritation, such as bandages, pins, or too great fulness of the stomach. Continual fretfulness often marks the beginning of disease, at which period there is time for the employment of a remedy. If fretfulness is combined with a disposition to doze, or take short naps, from which the child starts suddenly on the slightest motion or noise, there should be no delay in the administration of a remedy, for some important organ is invaded by disease. The same observation will apply to those conditions that are marked by rapid changes, such as becoming suddenly silent in the midst of a whining cry.

**Screaming.** This expression of the existence of disease is a



violent effort, indicating vigor, and is usually heard in the early or acute stage of disease. The face is flushed and the veins turgid, in proportion to the difficulty caused by the effort in the return of blood from the head; and when it becomes shrill and keen, and the heat of the skin is increased, inflammatory action has probably commenced. In inflammation of the gums from teething, the screams will be more or less protracted; but in inflammation of the chest or belly, the effort of breathing produces continual suffering, and increases the pain so much that the child controls, for some moments, the expression of those screams by fits and starts.

*Local symptoms.* These will direct us to the seat of pain; as, intolerance of light and tossing of the head point our attention to the *brain*; quick breathing, a panting or coughing, directs our attention to the lungs; palpitation of the heart, to that organ; costiveness or diarrhœa, to the bowels; nausea or vomiting, to the stomach; and a croaking sound points us to the larynx. *Moaning* is the most important and threatening language of complaint, as it is expressive of suffering, either from weakness or depression, which makes inflammatory diseases so difficult to treat. In painful dentition, children moan and grind their teeth at intervals, and in acute disease the moaning is repeated at every respiration. Moaning is the peculiar characteristic of disease of the stomach and bowels, especially if the body be bent and the legs drawn up. But if deep sighs precede the moaning, and the child speak with a nasal tone, leaving sentences half expressed, there is then, usually, a tending to effusion on the brain.

*Respiration.* There are peculiarities in respiration that should be attended to, as they are closely allied to the language of complaint. They are discovered in the modifications of respiration. Difficulty of breathing is not uncommonly produced by a mechanical pressure of the large glands, that is, of those under the jaws, and sometimes the *thymus gland*, which lies immediately under the breastbone; and to distinguish this from a real disease of the air-tubes of the lungs, is very important. The most formidable change from healthy breathing is that attending a disease bearing the name of croaking, chronic or cerebral croup, closely resembling the whistling sound in hooping-cough, but differing widely from it in its nature and cause. This disease consists in a spasm of the muscles of the *glottis*, and a secondary effort from a violent exertion\* to open the laryngeal constrict-

tion, as mere coughing is to open the air-cells of the lungs. It is possible that pressure on the recurrent nerve, produced by a sudden rush of blood in the glands that press upon it, may produce this effect, but it is generally caused by cerebral irritation. This crowing sound, though it may steal on insidiously, may be transient, and subside almost instantaneously, effecting the entire recovery of the child. "When it recurs frequently, and becomes more severe, it is attended with danger, and is often indicative of tubercular menengetis."—*Dindy*. We may also add, that when a cough assumes a spasmodic character, it usually indicates some affection of the brain; as cough, with mucous expectoration, is a pulmonary or bronchitic affection, and a dry and irritating cough, an affection from some disease or derangement of the stomach.

We have now gone through most of the signs of internal disease of infants and children. Every mother would do well to treasure them up in her mind, that she may be able to ascertain the location of the disease of her child; then turn to it in the index, and, by tracing the symptoms of it, she will find the remedies laid down for the different stages of each disease; when, by taking it in its incipient stage, she may be able to apply the proper remedies before it becomes dangerous, or difficult to remove.

#### OF THE USE OF FRUITS, ETC.

Questions concerning this subject are asked almost daily, and the answers are as various as the persons giving them. Experience generally governs the opinion in this matter; if an article of diet agree with one child, the mother usually supposes that it will agree with all children; and, on the contrary, if it disagrees with her or her child, it is supposed to be unhealthy for all others. This mode of judging of the healthiness or unhealthiness of an article of diet, however, should not be depended upon; the old adage being true in general, that "what is one man's meat is another's poison." But the question of the propriety of a given article of food requires several considerations, and so many exceptions, that no one should venture to answer it positively before giving to it an attentive consideration.

There are a few plain reasons that should govern us in our judgment on this subject. *First*. It is obvious that the Author of our being never intended that those who have no teeth should live on the same food that those do who have teeth. The diet that would be proper for the one, would be decidedly improper for the

other. From these considerations, we see that animal food, pastry, fruits, confectionary, &c., would be improper for infants; though these articles are not unwholesome in themselves, when taken in due quantities by an adult, or children that have teeth. *Second.* The food that would be proper for children after the teeth are perfect, would not be proper while they are forming. *Third.* The food for adult age, if employed before that period, would be often found highly injurious, though the general experience of the world shows that it is not hurtful in itself. *Fourth.* The food which universal experience declares wholesome, can only be so when taken in due quantities, at proper periods, and under proper circumstances; and, therefore, when we speak of food on which thousands have lived and done well, or from which others have suffered, as being wholesome or unwholesome, we certainly mean that it is either the one or the other, according to the age, constitution, circumstances, &c., under which it is taken. We would not be understood to say, that any article which is common would be hurtful to those who are in the habit of using it, but that circumstances make it so in many cases. We have declared that the meat of one animal is better than that of another; but this is very often a relative expression, as any of these articles may be pernicious under some circumstances, and the worst may not be so under others.

Shall we again ask the question, Are any of these substances injurious to children before they get their first teeth? And if so, What are they? These questions are fully answered in various parts of this work; but as indulgences in certain articles, at the period designated, may be too often granted, we shall say a few words under the heads of the different articles of diet used by children. And, *first*, of fruit in general:

Fruit is always in one of these states,—green, ripe, or dried; and of it, that is, of apples, pears, peaches, cherries, raspberries, strawberries, dewberries, blackberries, whortleberries, grapes, oranges, plums, pineapples, apricots, melons, &c., various opinions are entertained; but all agree they are injurious when green. We wish to be understood, when speaking of fruit as a diet, to speak of *ripe* fruit, unless otherwise expressed; and in doing this we shall limit ourselves to children under two years of age. We do not think fruit of *any* description proper for them, as we find its effects on them uniformly injurious. But is it asked, How can it be injurious, since they are so fond of it, and nature has furnished it so abundantly? In answer to this question, we say,

Children are no judges of the effects of fruit, nor of any other article of diet. They would eat the fruit of the *Jerusalem cherry*, the berries of the *laurel*, or the seeds of the *stramonium*, with as much avidity as they would the apple or the peach, though death would be the inevitable consequence. And to the second question we add, that nature has spread her poisons with as profuse a hand as her wholesome fruits, and, consequently, the abundance of an article cannot prove it to be good for food. Children under two years of age should take fruit very sparingly; though a little, perfectly ripe, and deprived of rind and seed, may be given occasionally. The fallacious notion that blackberries and dewberries are good for children suffering from diarrhœa, should be laid aside; for the seeds of those fruits are numerous and small, and act as an irritant to the bowels, increasing the disease they are designed to cure. Fruit of almost every kind is less digestible than farinaceous matter. The stomach of the ostrich, for example, which is said to digest harder substances than that of any other animal in the world, will not digest the pulp of a watermelon. When the stomach is incapable of assimilating what it takes into it, much disturbance is produced in the bowels, and often fatal diarrhœa. Some suppose that it will throw off all it does not digest, and therefore any quantity may be taken without injury. But this is a mistake; for food undigested acts as foreign matter. Swallowing the skins and seeds of fruit is urged by some, because it is thought that they promote digestion; but this is an error, and should not be indulged in. Digestion is performed upon vital principles and is a vital process, not one of fermentation or trituration.

*Dried fruit* is next in consideration. Of this there are various kinds, as raisins, cherries, apples, peaches, pears, figs, prunes, &c.; and of these it may be said, with safety, that they are more exceptionable than fresh fruits, but not all in an equal degree. The most injurious are the first four just named. Raisins are very indigestible, unless deprived of their skins, and should never be eaten by children without this precaution being first taken. No stomach can digest the skin of a raisin. *Dr. Dewees* says: "We know, from experience, that the stomach of a hog cannot overcome the skin of this fruit." Yet they are given, by indulgent parents, in large quantities to their children, at an early age, regardless of the power of the stomach over them. Immediate or remote injury, and not unfrequently convulsions and death, are the consequences. Dried cherries, pears, peaches,



and apples, are also unfit for children, especially when uncooked ; for, if taken in their dry state, they swell in the stomach, and are very apt to produce convulsions, and not unfrequently death. When they are well stewed, they are better suited for the purposes of food ; but even then they should be taken in small quantities by children. The fig and prune are less objectionable, but they should be taken sparingly. The stomach, when healthy, will bear small quantities of them without injury. Adults often take stewed fruit to promote digestion or remove costiveness ; but children should never take it for that purpose.

## OF THE ROSE-RASH, OR FALSE MEASLES.

This is an efflorescence of a bright rose color, diffused, or in patches, on a fainter ground of pink color ; sometimes assuming a serpentine form, resembling measles, and distinguished from it only by its bright color, and from mild scarlet fever, by the slight shading off from the principal spots. Very small watery pimples are sometimes seen in the eruption. In the hot months it is generally in the form of crimson or lake-colored patches, of an irregular shape, and at times there is a red circle formed around the patch. In grown persons this eruption sometimes appears during acute diseases. The patient generally has headache and feels weak before they make their appearance ; but afterwards these symptoms usually subside in a short time.

**TREATMENT.** — If there is much pain in the head, a child two years old should take :

*Recipe :* Calomel, ten grains.  
Salts of Nitre, two grains.

Mix, and divide into four powders. One of these may be given in sirup, and repeated every two hours till they operate freely. Increase or diminish the dose according to the age of the child. After the stomach is cleansed, keep the bowels open with :

*Recipe :* Senna Leaves, half ounce.  
Manna Flake, half ounce.

Mix. Boil to a strong tea, in half a pint of water. Give a table spoonful every hour, till they operate, and repeat this every day. Or,

*Recipe :* Castor-Oil, half ounce.  
Spirits of Nitre, two drachms.

Mix. Give a tea spoonful every two hours, till free purging is produced. Or you may give the following :



*Recipe :* Pulv. Rhubarb, ten grains  
Calcined Magnesia, one drachm.  
Salts Nitre, two grains.

Mix, and divide into four powders. Give one, in sirup or sweetened water, every three or four hours, till an operation is produced. Repeat some one of these purgatives every day, till the rash subsides. The diet should be light and the clothing cool.

There is another form of these eruptions, called *erythema*, which appear chiefly on the face and breast, in blotches of a dull crimson color, and disappear on pressure. They are usually transient, but sometimes are more severe, extending to and over a whole limb, and causing it to swell. This form of the eruption is often attended with distinct pimples, and turns to a kind of purple color on its decline. It is attended by a quick pulse, and a considerable depression of strength. In some cases, it assumes the form of hard lumps, of a rose color, spreading out from the centre with a red blush, in which case there is more fever. In young females, it appears sometimes on the fore part of the leg, spreads and becomes painful, but will gradually die away, in about a week, leaving a dusky-looking spot.

This is often an attendant on the sympathetic action of the uterine system; though it may be produced by external irritation, and may also be the sign of deeper seated disease. It generally, however, depends on some derangement of the stomach and bowels, or certain articles of diet. In children, it may be produced by unwholesome breast milk; and certain medicines, such as arrowroot, balsam copaiba, or turpentine, will produce them in some children; but in these cases they do not last long. In more slowly formed intestinal diseases, this complaint is more severe. We have seen, in very languid or unhealthy constitutions, the eruption of a very deep crimson color, or a dull, dark purple. In these cases the disease is marked by typhoid symptoms, indicating a cachectic state of the system.

The color of the eruption is very important in governing the treatment of the disease. The bright color requires a laxative and low diet; and the livid, in addition to the mild laxative plan, requires some mild tonics. It is needless to offer a long catalogue of remedies for all these forms of eruption; but in the lighter forms a gentle puke, followed by some of the purgatives presented for rose-rash, will be proper. We should remember, of course, to remove the exciting cause, if possible. If the gums are swollen and hot,

lance them, and change the articles of diet; regulate the temperature by changing the clothing, if necessary; and keep the patient quiet, and the bowels open, with gentle purgatives, such as castor-oil, rhubarb, or magnesia. If there is much fever, give the spirits of nitre, in water. Rice, tamarind, or barley-water, should be used as a diet and drink; and where the livid hue appears, a tonic, such as Huxham's tincture, should be given. The parts must be washed with milk and water, and dusted with starch or hair-powder. In a week or two the disease will be removed.

#### OF THE NETTLE-RASH.

The mild form of nettle-rash consists of white elevations, usually of a round, but sometimes of a long shape. The severer forms of the eruption are pale pink-colored elevations, on a deep rose-colored surface. The first form is unattended by fever; but the second is not unfrequently marked by the following symptoms: pain in the head; sickness at the stomach; great weakness and faintness, accompanied with a sensation not unlike that of the sting of a nettle, from which it takes its name. Scratching or heat always aggravates it. The eruption may last from six to ten days; after which time it will throw off the scales like fine bran. But if the spots become tubercular, and penetrate the skin and cellular substance beneath, all the symptoms are aggravated.

The exciting causes are various; the emotions of the mind, excessive exertion, acetic diet, eating mushrooms, honey, the rind of cucumbers, strawberries, shell-fish, especially muscles, unhealthy breast milk, lemonade, and in some cases even boiled fowl or young cabbage, will produce nettle-rash. In cachectic habits, the eruption may assume a purple hue, appearing more like blood settled under the skin than anything else. The frequent occurrence of these varieties in the same patient is a sufficient proof of a peculiar susceptibility to the disease; and the frequent irritation of it will produce marasmus, remittent fever, and in some cases a heavy drowsiness approaching stupor. For these reasons, this disease requires attention.

TREATMENT. — As there is more or less derangement of the stomach in nettle-rash, we should commence the cure by relieving it of all offending matter; and for this purpose, — to a child two years old, — the following medicine should be given:

*Recipe:* Ipecac., ten grains

Dissolve this in three or four table spoonfuls of warm water, and give it at three draughts, fifteen or twenty minutes apart, until the child begins to vomit freely; and then it must drink plentifully of warm water, till it pukes three or four times. Two hours after the last motion upwards, give the following purgative :

*Recipe* : Calomel, four grains.  
Calcined Magnesia, twenty grains.

Mix, and divide into two powders, and give one in sirup; and if it should not operate freely in two hours, give the other. The bowels should be kept open with this medicine, unless there is much fever or drowsiness, after the first purge; in which case the patient should take the following :

*Recipe* : Calomel, six grains.  
Rhubarb, four grains.

Mix. Divide into two papers, and give them in sirup, every two hours. When calomel is given, the child should drink toast-water; but when the other medicine is given, the drink may be cold. The dose must be increased or diminished according to the child's age. The skin may be rubbed with starch, sulphur, or hair-powder; the diet should be light, and the drink cool, but on no occasion should it be acid. We know that acid drinks are frequently recommended, but our observation leads us to forbid them.

Children that are subject to this disease suffer very much by its frequent returns; and to prevent this, its cause should, if possible, be ascertained and removed. If it be improper diet, it should be avoided; if unhealthy milk, the nurse should be changed, or the mother take medicine, to purify her blood, and restore her milk to a healthy state; and if irritation of the gums, they should be scarified. When the child is old enough to be fed, the diet should be light; the surface should be kept neither too hot nor too cold; and scratching should be especially avoided. The bowels must be kept open, but no saline medicines should be given. *Rhubarb* or *magnesia* will be the best.

The eruption is sometimes suddenly repelled by a drink of lemonade or a cool draught of air, and the patient becomes very sick, and perhaps faints, or vomits severely. Great prostration may take place; the feet and legs becoming cold, the pulse weak, the voice tremulous, and the lips pale or purple. Stupor may or may not ensue, and all the alarming symptoms of death hover around the patient. In this case, warm blankets must be

applied to the legs, a hot iron or brick to the feet, a mustard-plaster to the stomach, and some form of stimulant—as toddy essence of peppermint, mint tea, &c.—given internally; repeating it frequently till the surface becomes warm, and then less frequently, till the eruption appears again. After this the stimulants should be omitted, and a dose of *calomel* administered; which, when it operates freely, should be followed by rhubarb and magnesia, as above directed. Great care must be taken to avoid the causes that struck the rash in.

If the child is very weak, the following tonic may be given:

*Recipe:* Compound Tincture Gentian, one ounce.  
Elixir Vitriol, one drachm.

Mix. Give twenty drops, in sweetened water, three or four times a day, till the strength is restored.

We would here remark, that, in all eruptive diseases, great care should be taken to keep the eruption on the surface till it disappears, and thus all these alarming symptoms will be prevented.

#### OF ERYSIPELAS, OR ST. ANTHONY'S FIRE.

A full history of this disease would require a treatise instead of a chapter; we shall therefore only say as much about it as the character of the present work requires.

Erysipelas is divided into two forms: *first*, that of *debility*; and, *second*, that of *excess* of action. The first is marked by a deficiency of power, from the commencement, often terminating in mortification; and is thought by some authors to be seated in the child, in some cases, before it is born. This may or it may not be true. It is certain, however, that, in some cases, it occurs in a few days after birth. This form of the disease shows itself first in a dull crimson blush, changing to a purple or livid hue; often covered with blisters, or large lumps, which terminate in ulceration.

It usually commences on the face, or about the private parts, the arms, legs, or belly; and occasionally, in new-born infants, in the navel. The symptoms are, a weak pulse, great debility, brown tongue, and at times delirium; the inflammation sometimes penetrating so deep as to affect the peritoneum, or lining of the cavity of the belly. When the seat of the disease is in the navel, sinuses will sometimes form, and the parts slough off. The arrest of this disease is marked by a white line in the ear-

lier, and by pus in the latter, stages. Instead of bloody water, an ichorous discharge is seen, in the progress of the disease.

TREATMENT.—For the cure of this disease, we must cause the secreting organs to do their duty, by commencing with the following medicines, for a child six months old :

*Recipe :* Calomel, four grains.

Divide into six powders. Give one every two hours, in sirup or sugar and breast-milk, till they operate freely ; after which, give the following medicine :

*Recipe :* Pulv. Rhubarb, four grains.  
Calcined Magnesia, twelve grains.

Mix, and divide into six powders. Give one in sweetened water, and repeat every four hours, so as to keep the bowels regular. A few drops of vinegar added to the water will be of service, to make the magnesia operate better. If the child is very feeble, give the following mixture :

*Recipe :* Carbonate of Ammonia, three grains.  
Elixir of Paregoric, one drachm.  
Pure Water, one ounce.

Mix. Give twenty drops, in a little sweetened water, every two hours, increasing or diminishing the dose according to age. But if the skin is hot and dry, the following medicine should be given in its stead :

*Recipe :* Spirits Mendereri, one ounce.

Give twenty drops in orange-peel water, and repeat every hour, till the fever subsides. Or,

*Recipe :* Spirits Nitre, two drachms.  
Water of Orange-peel, one ounce.

Mix, and give forty drops, every hour, in sweetened water or balm tea. The inflamed parts should be bathed with the following solution :

*Recipe :* Blue Vitriol, one drachm.  
Sugar of Lead, half a drachm.

Mix. Make a strong tea of peach-tree leaves or twigs. Strain it, and to one pint of tea add one half of the above powder. Keep a cloth, wet with this solution, constantly applied to the inflamed part. If the inflammation be situated near the eye or ear, and is likely to get into either organ, its progress must be arrested by a mark, drawn around the edge, with a piece of lunar caustic. The point of the caustic must be wet, and rubbed around on the sound skin, near to the edge of the inflammation.



This will cause a black mark, over which the inflammation will not pass; showing plainly that the cuticle is its conductor. The part inflamed should be kept as still as possible, and the patient tolerably cool. If the mother's milk is not good, or she has not enough of it for the child, cow's milk, diluted with hot water, and slightly sweetened, should be used as a diet, in preference to anything else.

Erysipelas sometimes terminates in sloughing; in which case, a poultice made of charcoal and hop-yeast should be applied. The grounds of stale beer also make a good poultice. Or you may take the inside bark of the common buck-eye, boil it to a strong ooze, and bathe the parts well with it; thicken it well with wheat bran, and apply the poultice over the parts affected. They may be touched, lightly, all over, with *balsam Peru*, before either of the above poultices are applied. The poultice should be removed every three or four hours; but before it is applied, if the sores smell badly, the surface may be lightly washed with the chloride of soda. Should there be deep-seated matter, it should be let out by an incision; which, though a severe, is the only effectual mode of treatment. If the strength is likely to fail, some gentle tonic, such as the infusion of gentian or columbo root, must be given:

*Recipe* : Pulv. Gentian Root, half ounce.

Or,

*Recipe* : Pulv. Columbo Root, half ounce.

One tea spoonful of this root infused in half a tea cupful of boiling water, and a tea spoonful of the infusion may be given, in as much sweetened water; repeating the dose every hour or two, according to circumstances.

The *second* form of this disease shows itself in acute inflammation,—the skin being of a bright scarlet color,—and is generally preceded, for one or two days, by slight chills, fever, and heat in the part, and a stinging or pricking sensation; the pulse not being very hard or full. This form of the disease will sometimes decline on the third or fourth day; in which case the skin becomes yellow and peels off. But if it should not terminate in this way, small blisters will form, and, bursting in two or three days, discharge an acrid, glutinous fluid. This is the lightest form of the disease. If the inflammation be more deeply seated, all the symptoms will be more severe; chills and acute fever, edematose swellings; and a deep burrowing sanies will be making its way among the muscles and tendons, and when

discharged, it will be mixed with clots of dark grumous blood, entirely unlike the pus and circumscribed cells in common abscess. If the disease is not properly treated in this stage, it is apt to assume the sphaceloid character, and will require a treatment adapted to this change. We sometimes observe, in the acute stage, that the cutaneous vessels are inflamed, and purulent depositions take place in the cerous cavities and lungs, when the disease is situated in the neighborhood of these parts.

TREATMENT FOR THE SECOND FORM.—The first form of the second variety of this disease should be treated with the following medicines :

*Recipe :* Epsom Salts, half ounce.  
Tartar Emetic, half grain.

Mix, and dissolve in half a pint of cold water. Give one table spoonful, for a child four years old, and repeat every hour, till it operates well. Use a light diet, and cooling drinks, which may be slightly acidulated with an orange or a few drops of vinegar. The following diaphoretic may be given :

*Recipe :* Spirits Mendereri, half ounce.

Give thirty drops every hour, in a little orange water ; and let the inflamed part be sprinkled with flour. Should these remedies fail to perform the cure, more active medicines, such as the following, must be used :

*Recipe :* Calomel, ten grains.  
Rhubarb, five grains.

Mix, and divide into five papers, and give one every two hours, till a free operation is produced. If the pulse be strong and the fever high, the patient should be bled from the arm, and take the following :

*Recipe :* Calomel, twelve grains.  
Scammony, six grains.  
Salts Nitre, two grains.

Mix, and divide into six powders. Give one every two hours, till a free operation is produced and the fever is cooled off. If the patient is old enough, Seidlitz powders may be taken ; but if not give the following :

*Recipe :* Rochelle Salts, two drachms.  
Tartaric Acid, one drachm.

Mix in ten papers, and give one every two or three hours in cool water ; and, at the same time, give :

*Recipe :* Spirits of Nitre, half ounce.  
Wine of Ipecac., two drachms.

Mix. Give ten drops, in water, every hour.

If the brain or lungs be threatened, and the pulse will bear the lancet, bleed; but if not, apply cups or leeches over the chest, to the temples or back of the neck, as the case may require. They must be applied, however, on the sound skin. The blue ointment may be applied all over the inflamed part, and the progress of the inflammation arrested by a line drawn around it, with lunar caustic, about half an inch from the inflamed parts.

Some authors recommend the application of a blister, over the inflamed parts, as an infallible remedy; and we have known it to do good. If the patient is fleshy and the inflammation deeply seated, it will be advisable to make several cuts with a lancet through the inflamed skin, to relieve the engorged blood-vessels; and soft poultices of flax-seed or light bread and milk may be applied, keeping them constantly at rest, and, if possible, elevated higher than the other parts. If the disease arise from a punctured wound, as it very often does, it should be freely laid open, and made an incised wound. The same solution of the sugar of lead, blue vitriol, and peach-leaf tea, should be used, as in the other forms of the disease. In convalescence, some tonic should be given, according to the state of debility,—the gentian or columbo, as in the other species; or a weak solution of quinine; as,

*Recipe:* Sulphate Quinine, six grains.  
Elixir Vitriol, ten drops.  
Water, one ounce.

Mix. Give the drops five or six times a day, in sweetened water. In all cases, the patient should be allowed a pure air; and, in convalescence, a generous diet, according to age and strength.

#### OF HYDROCELE, OR WATER IN THE SCROTUM.

The first appearance of this disease is manifested by an enlargement of the scrotum, and is generally perceptible in three or four days after the birth of the child, who in all probability was born with it. The appearance of a swelling in these parts generally alarms the mother, who is always certain to suppose it to be a rupture. The swelling feels hard, but is not pained by the touch.

This swelling may always be distinguished from a rupture by the following rule: If a lighted candle be held, in the dark, below the tumor, and it presents the appearance of a slightly reddish transparent color, it may be regarded as certain proof that the disease is *not* hernia, but only water in the scrotum.

The water is generally confined to one side of the scrotum, but we have seen it in both sides. Children are liable to this disease up to the age of three or four years. In hydrocele, the tumor is smooth, and cannot be returned into the abdomen; nor is it at all painful, and it is always of the same size.

TREATMENT.—The remedies of this disease are few and simple. If the child is very young, the application of cold water,—say half a gallon each time,—poured, morning and evening, from the spout of a tea-kettle or coffee-pot, as high as the child can bear it, will, generally, in the course of a week, cause the absorbents to take up the water. Bathing the parts with weak spirits of camphor will frequently cure it in a week or two. But should the child be three or four years old, the following medicine should be given:

*Recipe* : Cream Tartar, one drachm.  
Pulv. Jalap, half drachm.

Mix, and divide in eight powders. Give one powder, morning and evening, in parsley tea, and continue this for ten or twelve days, at the same time bathing the parts, as above directed, with cold water, and a cure will generally be effected. No fear need be indulged of the return of the disease after the absorbents have taken up the water. Some surgeons advise a puncture to be made in the scrotum with a small trocar; but the above remedies should always be tried first. If, however, an operation must be performed, three or four silk threads should be passed through the scrotum, from above, downwards, with a small seton needle, great care being taken not to touch the testicle. Let the threads remain for six or eight days, and then draw them out, one each day, till all are removed. If much inflammation is induced, bathe the parts with sugar-of-lead water; though some inflammation is necessary, in order to effect a cure.

#### OF INGUINAL HERNIA, OR RUPTURE.

This disease is not of very frequent occurrence; but we occasionally meet with it in children, though more frequently in adults. It may exist before birth, or take place soon after; and may be suspected to exist when the scrotum on one side is unusually large. It may be detected by the tumor being removed by pressure, and by the testicle not being discoverable. It may take place at any period, but generally occurs during the most active stage of life. If a candle be held below it, no transparency will be discovered, on attempting to look through it.

TREATMENT.—Dr. Underwood says, “It may be safely left without a bandage, and the cold bath used for its cure, when it happens to children before they walk.” Dr. Physic advises “the application of a properly constructed bandage or truss to the part, as soon as the disease is discovered.” We are of Dr. Physic’s opinion. The use of the truss should *not be delayed*. If the truss be properly constructed, and applied when the hernia is first discovered, and worn constantly, the disease will be permanently cured. But, on the contrary, if this stage of the complaint be suffered to pass by, the abdominal ring will lose its disposition to contract, and the disease becomes permanent; or it may become strangulated in childhood, and cause death. We therefore advise the use of a proper truss *immediately*.

In using a truss, much care is necessary, as it should be properly adapted to the part; and all the protruded parts should be properly and carefully placed within the abdomen before the truss is applied. It should then be worn, day and night, till the cure is completed. Stagner’s truss is perhaps the best now in use. It should be applied by a physician who understands its use.

#### OF UMBILICAL HERNIA.

Umbilical hernia is a protrusion of the bowels through the umbilical ring, or the hole through which the navel-string passes. The true cause of it is a deficiency of abdominal muscles to fill the space through which the umbilical cord passes.

The existence of this disease is known by a protruding of that part when the child cries, strains in having a hard stool, or struggles, in fretting, or otherwise; the bowels at times pushing through the hole to the size of a hen’s egg. Occasionally, the bowels are retained in the umbilical ring, and become strangulated, that is, they do not return, rendering the situation of the child dangerous; and, consequently, great care should be taken to avoid this circumstance, by keeping the child quiet, and the bowels open.

TREATMENT.—The cure is to be effected by preventing the bowels from protruding through the ring, till the muscles grow and fill up the space. And to obtain this end, many means have been used, such as adhesive straps, and various forms of truss, of which, that made by Hall has been highly extolled. We, however, have never found it necessary to use anything but a smooth silk pad, convex on one side and flat on the other, with a piece of sheet-lead, covered with silk, sewed on the flat side. This must be fastened to the waistband; placing the convex part imme



diately over the umbilicus, and binding it sufficiently tight to keep the bowels within the abdomen. This should be removed twice a day, and the parts bathed with cold water. It should be worn till the umbilical ring is completely closed, and the parts become firm; which sometimes requires three or four, and in weakly children, or those born before the time, six or eight months.

## OF DIABETIS, OR SWEET URINE.

Some of our best authors—of whom *Dr. Dewees* is one—consider diabetes a sympathetic affection. This may be true, or it may not. Nor is it very important that we should know, provided we have the certain means of cure.

It generally happens to children while teething; and this is the reason why it is considered a sympathetic disease. *Dr. Horton* believes it, in some instances, to be a family complaint. It is, however, a formidable disease, rapidly emaciating the little patient, and if not soon arrested, will certainly prove fatal. In some instances, large quantities of urine, of a sweetish taste, are discharged in a day.

TREATMENT.—There is great thirst attending this disease; the kidneys secreting and throwing off the water almost as fast as it is taken into the stomach. The bowels should be kept open with the following medicines:

*Recipe:* Pulv. Rhubarb, twenty grains.  
Magnesia, Calcined, one drachm.

Mix in six papers. Give one every six hours, in a little sirup. In addition to this, give the following:

*Recipe:* Tincture of Iron, half ounce.

Four or five drops of this tincture, three times a day, will be sufficient. It may be given in sweet milk. The drink and diet should be milk alone, and the under-clothes should be kept moistened with *spirits of turpentine*. If these remedies fail, give the following medicine:

*Recipe:* Tinct. of Extract of Nux Vomica, three drachms.

Give from five to ten drops, three times a day, in milk, and increase or diminish the quantity according to the age; always beginning with the smallest quantity, and gradually increasing one drop a day, to the highest.

## OF INCONTINENCE OF URINE.

Incontinence of urine is frequently brought on by habit, but is sometimes a symptom of stone in the bladder; it is also frequently caused by a weakness in the sphincter muscles, or neck of the bladder. When it proceeds from habit, it may be remedied by the child's urinating before it is put to bed, and repeating attention two or three times during the night, until the habit is formed of rising and urinating at stated times. But where it is the result of a weakness of the sphincter muscles, or an acid state of the urine, we must resort to the following:

TREATMENT.—For a child one year old:

*Recipe*: Tinct. of Rhubarb, one ounce.

One tea spoonful three times a day; or,

*Recipe*: Magnesia, one drachm.

Divide into three papers, and give one every day, in sweetened vinegar and water, so as to keep the bowels regular. Barley or rice-water, flax-seed or slippery-elm tea, should be the constant drink; the diet should be light, and no drink taken after supper. If this fail, you may give to an infant one year old, four drops of the tincture of nux vomica, *as for diabetis*; and two drops of tincture of iron, in sweet milk or sweetened water. The dose must be increased or diminished according to the age of the child.

It not unfrequently happens that much older children are affected with incontinence of urine; and when it occurs at the age of four or five years, you may give the following medicine:

*Recipe*: Carbonate of Iron, forty-eight grains.  
Ext. Nux Vomica, three grains.

Mix well, and divide into twenty-four papers. Give one, in sirup, morning, noon and night, till they are all taken. If this does not cure the disease, repeat the powder; but add half a grain more of the extract to the twenty-four powders, and give them in the same way; taking care that the quantity be proportioned to the age of the child. The bowels should be kept open with rhubarb or castor-oil. The diet should be light, avoiding all very salt meats, as well as large draughts of any liquid.

There are a great many other medicines prescribed by authors for the cure of this disease; such as stimulating diuretics, or balsams of various kinds; the tincture of cantharides; the alkalies; the acids and tonics; all of which we consider useless. The remedies we have prescribed above are safe, easily given, and we have never known them fail.

## OF COSTIVENESS, OR CONSTIPATION.

With some children this is constitutional, and with others accidental. When of the former kind, the child may go from four to eight days without a passage; indeed, it is remarkable how long a child will sometimes go without an evacuation, and yet suffer no inconvenience from it.

Medical men are often consulted on this subject, and find, by strict inquiry, that the child has been habitually costive from its birth; whilst, perhaps, the mother has been habitually loose in her bowels, though sometimes she is also habitually costive. Children frequently continue in this habit till they begin to cut teeth, when the bowels gradually become more loose, but generally not sufficiently free and regular till the mouth is full of teeth and the child weaned. This state of things, however, does not always go on so safely; for this rigid constipation will sometimes be succeeded by fever and perhaps convulsions.

**TREATMENT.**—When fever shows itself under these circumstances, immediate attention should be paid to it. An injection should be given, and followed, for a child six months old, by,

*Recipe:* Castor-Oil, half ounce.  
Spirits Turpentine, one drachm.

**Mixed.** This should be warmed, and two tea spoonfuls given every two hours, till it operates freely. If the fever continue, give the following:

*Recipe:* Calomel, ten grains.  
Rhubarb, ten grains.

**Mixed.** Divide into six powders, and give one every two hours, in sirup, till they operate freely. If the fever should still continue, give the following:

*Recipe:* Calomel, six grains.  
Ipecac., two grains.  
Salts Nitre, two grains.

**Mixed.** Divide into six powders, and give one every two hours, in sirup, till the fever is removed, repeating the dose as often as the fever recurs. After it is finally broken, if the bowels still incline to constipation, give,

*Recipe:* Calcined Magnesia, one drachm.  
Tartaric Acid, six grains.

**Mixed.** Divide into six papers, and give one, in sweetened water, two or three times a day, so as to keep the bowels open.

But if the tartaric acid cannot be had, give the magnesia in sweetened vinegar and water; or you may give,

*Recipe*: Rhubarb, two drachms.  
Bruised Fennel Seed, one drachm.

Mix, and simmer them slowly, in half a tea cupful of water till reduced to one half the original quantity. Strain it well through a cloth; sweeten the liquor, and give a tea spoonful or two, two or three times a day. Children should never take medicine in honey, because it may give them the colic, or so involve the medicine as to prevent its operating.

Injections are of invaluable service to children; they should be made of molasses and water, with or without a little table-salt. Suppositories, made of castile soap, will often answer the purpose. They should be passed entirely into the bowels; being made an inch long, and a quarter of an inch thick, tapered a little at one end; and allowed to remain in the bowels for fifteen or twenty minutes, but no harm will be done by remaining longer. The bowels may be excited by an injection made of molasses and water, or gruel, sugar, and a little lard.

*Accidental Costiveness* is more common, and may proceed from irregular nursing or feeding, or from the want of attention in teaching the child to elicit an evacuation at regular periods. It is astonishing what may be effected by holding a child over a vessel, and instructing it in this way; but when this is not sufficient, an injection may be given.

*Artificial Costiveness* is often brought on by giving the child diet which is hard of digestion, and, of course, improper for it to have. Some children, however, can use almost any kind of diet, without affecting their bowels in any way. But of all the reprehensible ways of producing costiveness in children, the practice of giving them *laudanum* or *paregoric* is the most *blamable*. These medicines should never be given by mothers or nurses, unless there is some disease requiring their use, since they are sure to produce costiveness. Their habitual use has been known to produce idiocy.

To sum up the whole management of accidental and artificial costiveness, it consists, first, in regulating the diet,—giving nothing that will be heavy on the stomach, or hard of digestion,—and teaching the child to elicit evacuations daily, at certain hours. If these means will not do, use injections, and give such diet as will aid in this matter, as molasses and mush, milk and mush, rice mush, and bread made of unbolted flour. But never

give medicine for costiveness till all these remedies have been tried. Should they fail, give castor-oil, in small doses, or magnesia, or rhubarb tea, &c. If the infant has the colic, give it this mixture :

*Recipe:* Calcined Magnesia, one drachm.  
Tincture Asafœtida, one drachm.  
Elixir of Paregoric, one drachm.  
Water, one ounce.

Mix them well, and give a tea spoonful, in sweetened water, repeating half the quantity every half hour, if the first should not give relief; but an infant only two weeks old should take only five drops, and one two months old ten drops, and so on, according to the age. A child of one year old should take a tea spoonful. The vial should always be well shaken before the medicine is poured out. Infants rarely cry from crossness alone; they are either spoiled, or have pain somewhere; for no child is naturally cross, let it be what it may when grown.

#### OF VOMITING.

The vomiting of infants is by no means at all times an evidence of disease. Young and inexperienced mothers should recollect, that, in many cases, it is only an evidence of perfect health; for when an infant has nursed too much, and the stomach is painfully distended, nature, always faithful to herself, will throw off at least so much as is requisite to give relief. It should, therefore, be considered as a sign that the stomach is in possession of its healthy powers. The milk will be found to be perfectly sweet when ejected, nor will the child be less playful than before. All that is necessary in this case is to take it from the breast as soon as it ceases to nurse anxiously, for it should never be coaxed to nurse after it manifests an indifference for it.

But sometimes an infant vomits from other causes; from the stomach sympathizing with some other organ in its derangement.

**TREATMENT.**—When the vomiting proceeds from this cause,—that is, a disease in some vital organ, as the stomach, bowels, kidneys, or liver,—it is only to be cured by removing the original disease, be that what it may. And this is to be ascertained by the symptoms. If it be inflammation of the stomach, the child will have an anxious look, fever, a quick pulse, and pain and constipation of the bowels. It instantly throws up everything it takes; has constant thirst, but throws up the water as soon as it is swallowed. Neither has it any desire to nurse. In



this case, blood should be taken from the arm, a plaster of ground mustard applied over the stomach, and the following medicine given :

*Recipe* : Calomel, six grains.

Divide into six powders, and give one every hour, in clabour, or a drop or two of simple sirup, till they operate on the bowels. At the same time, injections should be used every hour, to promote the operation of the calomel, and cataplasms of mustard should be applied to the feet. The only diet given should be rice or barley-water, by the spoonful. When mustard is applied to infants, gauze or book-muslin should be laid between the plaster and the skin, and the plaster should be wet with vinegar.

*If the bowels are inflamed*, the same remedies may be used for their relief, and calomel, as directed above, should be given, till it operates freely.

*If the kidneys are inflamed*, the child will make no water, but will scream, draw up its feet, and vomit, by paroxysms. In this case,

*Recipe* : Magnesia, twenty grains,

dissolved in sweetened watermelon-seed tea, may be given for a dose, and repeated every two hours, till it operates freely. Then give,

*Recipe* : Carbonate of Soda, six grains.  
Water, one ounce.

Dissolve, and give a tea spoonful every hour. The drink should be flax-seed or slippery-elm tea. The warm bath should be used, and the diet should be very light,—rice or barley-water, sweetened with manna.

*If the liver is affected*, and the vomiting is caused by this disease, you will find the skin yellow, or at least the white of the eyes. The urine, also, will be yellow, and the stools light or clay-colored; in which case, small doses of calomel and rhubarb should be given

*Recipe* : Calomel, six grains.  
Rhubarb, four grains.

Mix, and divide into six powders. Give one every two hours, and repeat till the stools are thick and green, or dark. Let the diet be light, as before directed.

In all these cases, we have supposed the child to be one year old. But the dose must be increased or diminished, according to the age and strength of the child. If the remedies for a stoppage of water produced by inflammation of the kidneys have been

used, but without effect, let the child be put into a warm bath, and take an injection, with a few drops of laudanum in it. A small quantity of tea, made of watermelon or pumpkin seeds, parsley, or uva ursi, with eight or ten drops of the sweet spirits of nitre in it, may be given every half hour; and, after the bowels have been sufficiently opened, you may give a few drops of pargoric. When the kidneys act freely, the vomiting will cease.

If the child vomits from acid on the stomach, a little magnesia, or weak ley made of wood ashes, will often correct it, and relieve the vomiting. (See the chapter in which all these diseases are treated of.)

#### OF THE CRYING OF INFANTS.

The cry of a new-born infant is listened to with delight by its mother and friends, being the evidence to them of life and health. It is more than this to the infant, being not only of immediate, but mediate advantage to it—immediate, by facilitating the passage of blood through the lungs, where, until this moment, it had been unaccustomed to travel. It serves more effectually to expand the air-cells of the lungs, and thereby presents a larger surface for the action of atmospheric air, for the due oxygenation of the blood, on which the healthy functions of the system so much depend. Crying not only aids in clearing the lungs of phlegm and other things, but also strengthens and enables them better to perform their functions.

When a child grows large enough to manifest the need of attention, it generally has recourse to crying in order to attract that of the mother or nurse, and thus have its necessities relieved. These may be, hunger, thirst, or some bodily requirement, change of position, &c. A long continuance in one position is not only painful to the child, but injurious to its health. If the infant express no uneasiness, it is often compelled to lie too long in one position, and thereby sustain injury, by preventing the full circulation of blood through the whole system. The limbs are unequally exercised when the child is allowed to remain on one side for a length of time; and it should never be allowed so to remain longer than an hour or two. It will immediately express the pleasurable sensation produced by the change, stretch out its limbs, and again fall off into a sweet sleep. By these changes, the blood circulates freely, and all the parts grow uniformly. An infant should never be laid on its back; for if it should vomit, it might become strangled. Suffocation has been produced in this way.

In young children, the excitability of the system accumulates rapidly; and crying is the only means by which they can exhaust it, if they are not handled sufficiently for this purpose. Some children possess much more excitability than others; and, consequently, we see some cry more readily, and for trifles, as we suppose, while others can scarcely be made to cry for any cause. Children that cry so easily should be allowed much more exercise than those that cry but little or not at all. The more you allow a crying child to exercise,—thereby exhausting the excitability of its system,—the less disposed will it be to cry. Parents should not forget this fact. Adults are often relieved from an accumulated excitability by crying; for who has not witnessed the relief given to the aching heart of an adult by a gush of tears? Crying may, however, be indicative of disease; but this will be noticed in its proper place.

#### OF THE NECESSITIES OF THE CHILD.

“The necessities of the child are no less remarkably changed than its relations.” It must now breathe a pure air, or it dies; it must receive and prepare food, by the operation of its own stomach, for the growth of its system, or it sinks; it must be protected against the variations of temperature, or it perishes. In a word, a new kind of life commences from its birth; and that this may be preserved in the best possible manner, is the end and object of physical education.

It will now be noticed why this species of education should be pursued at the period we have assigned to it in another part of this work, since it is certain that the more perfect is the health of the individuals who marry, the more perfect will be the foetal life of their offspring, and the animal life which is to follow. The new agents to which the body is to be subjected are, air, food, clothing, exercise, and cleanliness; each of which exerts a powerful influence on the welfare of the being on whom it acts. The operation of these agents commences with the first motions of animal life, and is perpetuated, under some modification or other, to the last period of human existence.

#### OF PURE AIR.

It is not our purpose, in this chapter, to enter into an analysis of atmospheric air, nor to show how impure air is eliminated and pure air evolved. We will, however, say, that atmospheric

air is composed of oxygen and nitrogen gas; of the former twenty parts, and of the latter eighty parts. This comes very near the true quantity; but there are gases mixed with the air, which render it impure and unfit for respiration, and in some proportions become poisonous and deadly in their effects upon the human system. Those gases which are most common are the carbonic acid and the azotic gas. The former is the product of decomposed vegetable matter, and the latter that of animal decomposition. It is proper, therefore, in order to preserve health, that we breathe as little of the above-named gases as possible. Oxygen gas is the supporter of animal life; without it, the blood would lose its vitality, animal heat would fail, and life become extinct.

We see, then, how pernicious the practice is of covering up an infant's head, and thereby preventing the due quantity of oxygen from being inhaled; for every inspiration exhausts all the oxygen taken into the lungs, and evolves, in its place, carbonic gas. Hence, if the free access of atmospheric air be excluded from the child, you exclude the oxygen so necessary to its life; and therefore the practice cannot be too much reprehended. When the child's head is covered it inhales, at every inspiration, a certain portion of the air which is under the bed-clothes, and that portion of air is almost entirely deprived of its oxygen; the child must, therefore, at the next inspiration, inhale a portion of the carbonic gas which it has just thrown out, and which is injurious to health, and should not be inhaled. This may be repeated till all the oxygen of the air under the bed-clothes is imbibed; when death must be the consequence, if oxygen, or pure air, be not immediately supplied.

Another serious injury to children grows out of the practice of the mother of keeping the child to the breast all night, with its head under the bed-clothes; and here a double injury follows. The oxygen gas is destroyed, and the sensible or insensible perspiration, that is constantly escaping from all living bodies, aids in rendering the air impure, and therefore unfit for respiration. A candle placed under the bed-clothes will be extinguished immediately; and air that will not support combustion is not fit for respiration. Every article of clothing should be removed from the room as soon as it is taken off the child. Diapers, either wet, or rendered impure in any other way, should not be suffered to remain in the nursery. If possible, a diaper once wet should not be used again till it is washed. But should it be

used a second time without being washed, it should be dried in the open air, and not in the nursery; for the uric acid thrown off from the diaper by drying, renders the air impure. And everything that will have this effect should be removed from the nursery or room where the child is kept, that every inhalation may afford a sufficient amount of pure air for invigorating and strengthening the system. Hence, washing and ironing clothes belonging to the children, in the room or nursery where they stay, should be avoided. Smoking tobacco in the room should not be allowed; indeed, no woman who uses tobacco in any way is fit to be a nurse for children. Nor should burning oil, with a long wick, be allowed in the nursery. And, in addition to all the above precautions, the room should be frequently ventilated; in doing which, however, care is necessary, in order to prevent a stream of cold or damp air from passing immediately over the child.

#### OF TEETHING.

We do not think it necessary to enter into a minute anatomical description of the first formation of the teeth, with all the changes which they undergo before they make their appearance through the gums. The order which nature observes in carrying out this important and sometimes hazardous process, is all that we think necessary for our present purpose.

The teeth are formed, in part, in the fœtus, and are developed, when in regular order, in the following manner. The first set consists of four incisors, or cutting teeth, in each jaw; two canine or dog teeth, commonly called stomach teeth and eye teeth; and four grinders;—making in all twenty; that is,

8 incisors or cutters,

4 canine or dog teeth, or stomach and eye teeth,

8 molars or grinders.

It is the passage of the teeth through the periosteum and gums that creates the disorders of teething. The teeth grow more rapidly than the absorbents take up the opposing membranes. The cutting of the first set of teeth generally commences about the sixth month, and ends between the second and third year of the child's age. All these teeth are smaller than the permanent ones, with the exception of the bicuspid, or small grinders; and this is a wise arrangement of Providence, to keep the jaws filled as they enlarge by the growth of the bones.



The order of teething is as follows: first, the two middle incisors of the lower jaw, and then, after an interval of three or four weeks, the corresponding teeth in the upper jaw. But this order is sometimes inverted, and all four of the teeth appear in the upper jaw before the appearance of those in the lower one. After this, the canine teeth below appear; and these are followed by the corresponding teeth above. The first two grinders are those of the lower jaw, and are soon followed by those above. After a lapse of from four to six years, two more grinders are added to those already in each jaw; and these are permanent teeth. At times, from eighteen to twenty-one years pass before the person cuts four more teeth, one in each jaw, above and below; and these are called wisdom teeth.

This is the regular order of teething; but there are many variations from it. We have seen three or four children born with teeth. Such teeth seem to be loosely fixed in the gums, and are troublesome to the mother. It is said that Louis the Fourteenth of France was born with teeth, and Richard the Third of England. They do not appear to be of the least use to the child, but rather in the way. Neither do they argue vigor of the constitution, but rather debility; for, being out of the order of nature, they are of course imperfect.

It has been a matter of observation by authors and physicians generally, that the teeth, in some instances, are very tardy in making their appearance. We have seen cases where the first teeth have not appeared till the twelfth and fifteenth month, and some later even than this. *Vansweiten* and *Dewees* mention such cases; and *Rayer* cites a case where the canine teeth did not appear till the child was thirteen years old. Its health was bad, and before the teeth appeared it had sore eyes and convulsions. No doubt this child was a subject of scrofula. *Fourhard* relates a case where the child was six years old, and had none but the fore teeth. *Brouzet* gives a case where only half the proper number of teeth was present at the twelfth year; the gums had become as hard as those of an adult. And *Professor Baumis* gives the history of a man whose teeth never appeared.

At the time of birth, the teeth are lodged in separate compartments; the deciduous ones having their respective stations within the cavity of the jaw-bone, and placed over one another. Each tooth is at first but a pulpy substance, and acquires hardness as the fœtus becomes older. The crown hardens first; the root then becomes bony, and is hollow, that it may have blood-

vessels and nerves admitted into its substance. The whole tooth is surrounded by a delicate, sensible, vascular membrane; and this membrane, when put upon the stretch, gives great pain, which is immediately relieved by cutting the gums freely down to the teeth. This knowledge of the phenomenon of teething or dentition is of much importance in the management of the child.

The signs of dentition are, *first*, heat in the mouth, which is first perceived by the mother, through the medium of her tender and delicate nipple. This heat produces thirst, and makes the child demand the breast more frequently than before. The gums itch, which is evidenced by the child's stripping the nipple through them; it also rubs its mouth with its fingers, and bites hard substances which are placed between its gums. The older the child is before it teeths, the greater is the pain caused by this process; and the mother is often made to suffer from its severe bites upon the nipple.

*Second*; a slavering in salivation is apt to attend this stage of dentition; and this is of service to the child, as it allays the inflammation and irritation of the gums, moderates the thirst, and supplies an additional quantity of saliva to assist digestion though if too much of it should be swallowed, the child will suffer with a bowel complaint; but this, by diminishing the general vigor of the arterial system, keeps down fever.

*Third*; after these symptoms have continued for a longer or shorter time, a small white speck is apt to make its appearance on the gums, over the tooth. When this breaks, or is cut, the tooth soon appears; and it is not unfrequently the case that a small quantity of serum is discharged when this speck is opened.

*Fourth*; the membrane of the nose is frequently affected by sympathy, and the child rubs and pulls at its nose; often deceiving the mother, and sometimes the physician, causing them to believe the child is affected by worms. The irritation in this membrane sometimes causes sneezing.

*Fifth*; fever is often provoked by teething. This shows itself by heat in the palms of the hands; high-colored urine, which is oftentimes offensive; a flush in one or both cheeks; great dryness of the lips, and heaviness of the eyes.

*Sixth*; if several teeth are about to appear at the same time, the above symptoms will be increased in force; the gums will become somewhat spongy, very red, and sore to the touch; the fever will be increased; the urine more copious and smell

strong; the child will become impatient, fretful, and have frightful dreams, starting, laughing, or whimpering, while sleeping; diarrhœa, more or less violent; the glands under the jaws swell; the eyes become sore or tender; and if the teeth do not soon appear naturally, or are not relieved by scarifying the gums, convulsions may ensue. These symptoms rarely all appear in the same patient at the same time, but they occasionally occur. Some children cut all their teeth so easily, that none of the above symptoms make their appearance to any alarming degree.

Teeth are not cut by forcing themselves through the gums, but by pressing every way on the incumbent membranes, causing the absorbents to take up the membranes, and so give place for the teeth to pass through. The belief that teeth force themselves through the gums has given rise to the practice of using coral, or some other hard substance, to aid their passage; but, although the theory is false, the practice is perhaps a good one. It is, at least, in imitation of nature; it causes the absorbents to take up the membrane, and let the tooth come through; it gives relief by promoting salivation, and thereby relieves the vessels of their redundant fulness. But softer substances than coral or ivory should be used. Gum elastic is perhaps the best, or a piece of thick, spongy leather. The article should be one that would not break and pass down the child's throat, or it might be choked by the detached pieces. Rubbing the gums with the finger is grateful to the child, and may be practised to advantage.

*Second dentition.*— Before the period for the second cutting of teeth arrives, the child undergoes a considerable change in constitution and person. The jaws have spread out, and acquired considerable strength; the fontanels of the head are generally closed by bone; the limbs have become stronger, and the child is able to walk firmly. The abdomen loses the rotundity it possessed, and becomes flat; the eye becomes expressive, and all the features are fully formed, though not fully developed; the sense of discrimination becomes more accurate; it now has the power of expressing its wants; and thus obviously improves till the seventh year. At this time, the first teeth generally drop out, to give place to a second set; and this operation is called shedding the teeth. The first teeth are twenty in number. The second set are at first twenty-four; in six or seven years, four more are added; and at the age of eighteen or twenty, four more, called wisdom teeth, making in all thirty-two, which compose a full set.

The second teeth do not push out the first, as is supposed by some, but arise from sockets of their own, and *within* the bone; while the first teeth only rest *on* the bone. They, moreover, do not occupy exactly the place that the first did; they fill the enlarged mouth. And, were it not so, the adult would have to chew on the front part of his jaws, and have but little space on which to grind his food. The first set of teeth, then, have but little control over the second, if, indeed, they have any at all. The decaying of the first teeth,—which is a common thing, especially if the child has been sickly,—has no bad influence over the second set; but the stumps of the first set should always be removed if they become painful.

The incisors or cutting teeth, and the cuspidati or first grinders, require from six to seven years to get their growth; the bicuspidi about seven or eight; and the molars or large grinders about twelve years. From their increase in size and number, the second teeth sometimes do not find sufficient room in the jaws to arrange themselves in regular order; and when this is the case, some of the teeth should be extracted to give room for the balance. But this, of course, is the work of a dentist.

#### OF CARRYING THE CHILD IN THE ARMS.

Young infants need exercise, but this should be given in a proper manner. Those who are a few days old, should, when they awake, be placed in a different position from that in which they slept. They should be frequently laid on a level, smooth, soft place, that they may have the privilege of stretching their tender limbs. They soon express grateful feelings for this change of position, by throwing out their arms and stretching out their legs; appear relieved; and soon fall away into a comfortable sleep again. This exercise gives strength to the muscles, and life and energy to the whole frame.

Children, when a little older, should be taken up frequently, held in a semi-horizontal position, with the head and shoulders well supported by the hand or arm of the nurse, and, in this position, be carried over the room several times, to let them enjoy fresh and pure air. The head should always be well supported. The practice of placing children on their feet at an early age, to make them look smart, or setting them up erect before they are able to hold up their heads, is very wrong, and often gives a position to the head that is not easily overcome. The tender joints

of the backbone may be greatly injured by it, and a curved spine often follows such a practice. After the child has acquired sufficient strength to sit up without much support, it may be indulged in, if done in a proper manner; that is, not too long at a time, nor too often repeated. A child should rarely ever be made to sit up before the third month; otherwise, you may induce a curvature of the spine. After this age, it may be carried in the arms of the nurse, if properly handled, as daily exercise will be an advantage to it. We shall here lay down a few rules for this practice.

The child should never be so placed on the arm as to be obliged to support itself, or be in danger of falling backwards; but the whole body should be supported by the hand and arm on which the child does not rest. It should never be carried on the arm till the muscles of the neck are strong enough to support the head easily in an erect position. Nor should it be always carried on the same arm, but should be frequently changed to the other arm, to prevent a curvature of the spine. It should never be made to put an arm around the nurse's neck; for this will displace the shoulder-blade, and injure the side and back of the child. Nor should the nurse's arms grasp it too firmly; for, as all its bones are soft, they may, by this means, become bent, and grow crooked. None but an experienced nurse should be allowed to carry a young infant; otherwise, it will be more likely to be injured than benefited by nursing in the arms.

#### OF WALKING.

The child has to acquire several powers before it is able to walk. It must have the use of its limbs in all directions. It must move one foot before the other, without falling, and we have directed how to acquire these powers in the previous chapter. This muscular power is too often interrupted by parents. They wish to see their children walk before they crawl. This is wrong; for crawling is very beneficial to children. They never act in this manner without having some object in view which pleases them; and this is good for them, both for muscular and mental exercise. Children who crawl are always more robust than those who do not; for crawling exercises every muscle of the body, and gives vigor to the whole system. After children have crawled a while, they wish to do more; they climb up by a chair, and stand. They then try to balance themselves, which exercise always pleases them. After a while, they will try, from



a perfect balance, to take a step; and presently, though they may get many falls, they learn to walk. All children are delighted when they can stand alone; and they will clearly manifest this delight by their countenance and actions. After repeated trials at this little adventure, they proceed to walk; and this they soon perfect, to a certain degree.

We grant that children may be taught to walk without crawling, but we insist that it is not the better plan. By forcing a child to stand on its feet before it feels a disposition to do so, you bend the long bones; and thus it becomes bow-legged, the spine becomes crooked, and if there should be any disposition to rickets in the child, that disease will be certainly promoted thereby.

Many plans have been devised to teach children to walk; but we, without hesitation, condemn them. All go-carts and leading-strings should be destroyed; and mothers should remember that there is a God who has ordered the operations of nature, and they are only agents to carry them out. If it had been proper for children to walk at an earlier period than they do, their bones would have been formed hard and strong enough at the first. Look at the colt, the calf, and other four-footed animals, that have to depend upon themselves, when born, to come to the mother for nourishment. They all have *hard bones*; but it is not so with the child. Pervert not, then, the order of nature; but let your babe crawl, then stand, then walk, then run, and all its limbs will be perfectly developed, and grow up in symmetry of form.

*Other modes of exercise for children.* — After a child has learned to walk, it seems to desire to be almost constantly in motion. This desire is, perhaps, induced by the attraction of surrounding objects, and should always be indulged. But children cannot always perform on foot the journeys that are required to reach the places to which they are destined; and then other modes of exercise become necessary. We have already spoken of carrying on the arm, and of walking; and we now come to speak of exercise taken in a carriage, or on horseback.

The baby-carriage is the better of the two. These carriages should be made low, the wheels placed wide apart, and they should run steadily on a smooth axletree. The springs should be elastic, and the body of the carriage large enough for the child to lie down in if necessary. A covering should be added, for protection from the sun; and the carriage should always be drawn at a moderate pace, and never violently jerked, or rapidly put in motion. The place upon which it is drawn should be smooth

the child should be placed in it in such a position as to be perfectly at ease. When young, it should be horizontal; when it grows older, it may be raised up a little; and when it can crawl, walk, or run alone, it may sit upright in the carriage. Great care should always be taken to prevent its falling out. The child should never be exercised in this way more than half an hour at a time, and should never be allowed to sleep in the carriage; as sleeping in the open air is injurious to children, besides teaching them a bad habit, that will prove troublesome to the mother or nurse; for they will soon refuse to sleep without the carriage. They should never be taken out in weather either too hot or too cold or damp, and while in the carriage, should be kept all the time in motion.

*Riding on horseback.*—As soon as they are able to hold the reins of a bridle, children should be taught to ride. This is the best exercise which can be taken; it brings into action every muscle of the body, and is an agreeable amusement. Children are fearless of danger on horseback, and soon learn to keep their seats and ride well; they therefore should be allowed to practise early, but under the careful eye of a parent, nurse, or riding-master.

*Games.*—There are but few games that do not, more or less, endanger the health of children, or lay the foundation of bad morals. Children are apt to become over-heated at most of the games practised in this country, and parents should be careful how they allow their children to engage in them. None should be allowed except those that are not absolutely injurious, and even then in a moderate degree; and of all this the parent should always be the judge. Nothing is comparable to exercise on horseback, both for boys and girls; and this, under the protection of suitable persons, should be practised freely.

#### OF BATHING.

An impure state of the skin will always bring its penalties; and it should, therefore, always be kept clean.

Bathing is justly esteemed a luxury by all who have used it; and children should be bathed in tepid water, from the time they are born until they are two years old. After this age the water may be cool. The bath should be used with them, in the form of a wash of the whole body; and this should be repeated at least three times a week, and as much oftener as may be required in order to preserve perfect cleanliness.

Some advise the cold bath for children. We shall not enter into an explanation of the many dangers that would attend its use in the case of infants; they are numerous, and in many cases fearful. But the bath of the temperature of eighty-four degrees, or a little less than blood heat, can never hurt, if properly applied. A little soap should be used, especially on the lower extremities; but the head of an infant should always be washed and dressed first. It is hardly necessary to advocate this practice in this country, where mothers are so well satisfied of its great utility. Health, vigor, activity, and complexion,—and may I not say good sense?—all, to a certain degree, depend upon it. Children should always be bathed before going to bed, and not be awakened in the morning and placed in the bathing-tub.

As before stated, we shall not enter into all the details why the cold bath should not be used for children; suffice it to say, that the experience of the medical world is against it; and for good reasons. If there be any latent disease in the system, the cold bath, by its shocks, will invariably do an injury. The plea that it is a tonic, is founded in false theory, and will be, if it has not already been, exploded. It will do for robust, healthy male adults, but it never did, and never will, do for delicate females or males, or young children. By all means, keep the skin clean and the pores open,—but not with cold water,—and your children will be healthy and sprightly.

#### OF JAUNDICE.

The yellow color which is so common to new-born infants does not constitute the disease now under consideration. This yellow tinge may disappear in a few days, leaving no bad consequences to follow.

The disease under consideration is distinguished from all others by the following symptoms: A yellow tinge in the white of the eye; a yellow skin; urine quite yellow, and the stools of a light clay color. The child is more or less feverish, and not unfrequently pukes. These symptoms may all be aggravated and much increased in violence, and we rarely see two cases presenting exactly the same symptoms to the same extent. The skin sometimes assumes a dark or livid color; at other times it presents a motley or spotted appearance. The abdomen may be too hot or too cold to the touch; the extremities are sometimes cold; the child very languid, presenting great debility and symptoms of prostration. The danger of the case may be judged of by the

violence of the symptoms, the age and strength of the child, and the length of time the disease has existed.

TREATMENT.—Many remedies have been prescribed for the cure of this disease, as castor-oil, sirup of rhubarb, and decoctions and teas of various kinds,—all of which have had their advocates in their day. But the only sure remedy is to be found in those medicines that act effectually upon the liver, and excite a healthy secretion from that organ. The cure may be commenced by giving a child six months old,

*Recipe*: Castor-Oil, two drachms.

Mix in sweetened water, and give it for a dose; which may be increased or diminished, according to the age of the child. If the stools are yellow or green, when the oil has operated, the point is gained, and, by keeping the bowels open, the child will get well. But it too frequently happens that the stools continue to be light, or clay-colored, notwithstanding the operation of the oil; and, in such a case, try,

*Recipe*: Calomel, three grains.  
White Sugar, ten grains.

Mix in six powders, and give one, every two hours, in sirup or molasses. This dose is for a child six months old, and it may be increased or diminished, according to age. If the child should puke, or the stomach be very irritable, the following mixture may be given:

*Recipe*: Sup. Carbonate Soda, one drachm.  
Water, one ounce.  
Compound Spts. of Lavender, one drachm.

Mix these together, and give a tea spoonful, sweetened lightly, every half hour. Flannels dipped in warm brandy or spirits may be applied to the region of the stomach.

After the stools have become green or dark, and consistent, that is, thick, you may stop giving the powders, and give the following:

*Recipe*: Sirup of Rhubarb, one ounce.

Give a tea spoonful every two hours, till it operates freely.

If the skin does not begin to clear, and the urine assumes its proper color, repeat the powders; or you may give,

*Recipe*: Blue Mass, twelve grains.  
Pulv. Rhubarb, twelve grains.

Mix in six powders. Give as above, till they operate freely: and follow them with these powders:

*Recipe* : Calcined Magnesia, twenty grains.  
 Pulv. Rhubarb, four grains.  
 Cream of Tartar, ten grains.

Mix in six papers. Give one, in sweetened water, every three hours, till they operate freely.

If symptoms of great prostration should take place, the skin become brown or spotted, the eyes sunken, the urine very yellow, and the stools thin and light-colored, the stomach very sick, and hiccough troublesome, the case may be regarded as dangerous. But all dangers are not death; and we should, therefore, persevere. Warm a gallon of water, and add to it,

*Recipe* : Spirits of Nitre, one ounce.

Bathe the child in this, every two hours, and give the following medicine :

*Recipe* : Calomel, ten grains.  
 Pure Musk, one grain.  
 Pulv. Mace, two grains.

Mix in ten powders, and give one, every two hours, in sirup; or, you may use the following :

*Recipe* : Whiskey, one pint.  
 Nitric Acid, one drachm.

Mix. Add this to one gallon of warm water, for a bath, which should never be over milk warm. If the feet are cold, mustard plasters should be applied to the ankles, and one over the pit of the stomach. If the child puke much, the breast will be the most suitable diet. If it cannot suck, it should be fed with breast milk. If it is weaned, rice, or toast-water, arrow-root, gruel, or boiled milk and water, will be its best diet.

In all cases, the room should be kept of an agreeable and uniform temperature. If excessive vomiting continue, a few drops of paregoric may be given, and repeated every fifteen or twenty minutes, till the puking is allayed; or Dewees' mixture, which is,

*Recipe* : Calcined Magnesia, half drachm.  
 Tincture Fœtida, one drachm.  
 Laudanum, forty drops  
 Water, one ounce.

Mix well; from a half tea spoonful to a tea spoonful is a dose for a child, according to its age. After the obstructions are removed from the liver, and the stools are of a yellow color, a tea made of wild-cherry bark may be given, to clear the skin. If the child be a year old, a table spoonful, four or five times a day, will be sufficient. The infusion is made by adding an ounce of



the bark to a pint of cold water, and letting it stand twenty-four hours before using.

In convalescence, exercise in the open air will be good; and if the child be much debilitated, a gauze flannel should be worn next the skin.

#### THRUSH, OR APTHEA.

The thrush may attack persons of any age, under some peculiar conditions of the system, such as chronic diseases, where the patient has been a long time sick, and is reduced very low. But that is not the form of the disease of which we are now about to treat. The thrush we now speak of is that of infants.

Almost all infants are subject to thrush at some period of their infancy; but most commonly at the early age of a few weeks, at furthest; and some are attacked with the disease as early as the first week. The disease, in its first indications, is not unlike small specks of clotted milk, adhering close to the lip, cheek, tongue or gums, where it first appears. The most common color is white, though it is sometimes yellow, and sometimes very red, not unlike blood. The grades of color seem to depend upon the violence of the disease, the lightest color being of the mildest form. When the eruption first makes its appearance, it generally, in a few days, spreads so as to cover the inner surface of the mouth; but in some cases it is confined to the cheeks only, or to the top of the tongue, with a few specks in the roof of the mouth.

The eruption is not always confined to the mouth. It frequently, in bad cases, extends through the whole length of the œsophagus, or throat, down to the orifice of the stomach. Some authors suppose that the eruption passes through the whole length of the alimentary canal or bowels; but this is doubtful. It is true that the discharges, which are very thin and acrid, excoriate the anus and nates of the child; but we do not think this sufficient proof that the eruption has passed through the child, as no dissections, hitherto, have shown any eruptions within the bowels.

When laboring under this disease, the child frets and cries very much, partly from the heat and pain of the mouth, and partly because it cannot suck as it wishes to do. It is frequently sick at the stomach, and vomits more or less. If the nipples of the mother have any cracks or tender places on them, the thrush may be communicated to them by the child.

The child falls away rapidly while under the influence of thrush, because it cannot take nourishment enough to sustain itself.

**TREATMENT.**—The common remedy for thrush is a preparation of borax, honey, and sage tea.

*Recipe:* Pulv. Borax., one drachm.  
Strong Sage Tea, six ounces.  
Strained Honey, one ounce.

Mix them together, by simmering them over a slow fire, till they are duly united. It is then used in the following manner: Wrap a piece of thin, soft rag around the finger; dip it in the mouth-water, and apply it to every part of the mouth; and this should be done every hour. We deprecate the practice of rubbing off the crust in the mouth by friction with a piece of flannel, as the manner of some is.

The bowels should be kept open with some gentle purgative, at the same time, such as,

*Recipe:* Simple Sirup of Rhubarb, one ounce.

Give a tea spoonful, two or three times a day.

*Recipe:* Calcined Magnesia, half drachm.

Divide into three powders, and give one, in sweetened water, every four or five hours, till they operate freely. But sometimes the disease is more inveterate, and will not yield to this simple remedy. The following medicine should then be given:

*Recipe:* Calomel, three grains.  
Pulv. Mace, one grain.

Mix in six powders. Give one, in sirup, every two hours, till they operate well. This medicine may be repeated, every other day, till the disease yields; and the first wash should be used freely and frequently. The child must be fed with breast milk, if it cannot suck. The mother's nipples should be attended to with the wash.

If the above wash should not, by the aid of the internal remedies, cure in a few days, add,

*Recipe:* Tincture of Myrrh, two drachms,

to each portion of the mouth-water, and use it as above directed.

In some cases, after the eruption is removed, the bowels are left in a state of debility and relaxation, and very much griped, and the stools are thin and green. In this case, use the following mixture:

*Recipe:* Calcined Magnesia, twelve grains.  
Elixir Paregoric, fifteen drops.  
White Sugar, one drachm.  
Boiled Water, one ounce.

Mix. Give a tea spoonful of this mixture every two hours, till the bowels are more tranquil, and the stools of a better color and consistence. But if the bowels still keep too loose, and the child is much weakened, give the following:

*Recipe:* Calcined Magnesia, twelve grains.  
Laudanum, three drops.  
Prepared Chalk, half drachm.  
Boiled Water, one ounce.

Mix properly, and give as above, till the bowels are tranquil and the discharges are corrected. Sometimes Dewees' mixture will answer this purpose very well. Of this mixture from fifteen to thirty drops may be given to a child from two to six weeks old. It should be sweetened before it is given, and may be repeated every two, three, or four hours, as circumstances require.

#### OF COLIC.

Infants are subject to colic from the time they are one or two weeks old till they have cut their first teeth. There are two kinds of this disease. The first kind may seize the child at any time of the day, without any assignable cause, and generally attacks children of feeble constitutions. The child may have a full supply of milk, and yet not thrive.

The second kind is produced by the use of unhealthy milk or improper diet. The bowels are in some cases loose, and the stools may be green and frothy, or light-colored and yeasty. When the food is the cause of the pain, the child becomes uneasy almost as soon as it is swallowed; and if from unhealthy milk, the like result is observed. In either case, the bowels throw off their contents undigested.

The symptoms of the colic are, a tension of the belly, wind, a drawing of the knees up towards the stomach, as if from pain, screaming, and a belching of wind from the stomach, from which some relief is gained, for a short time. If nothing be done to give relief, the child will exhaust itself by crying, fall asleep after a free eructation, and when it awakes will be free from pain. With some children, these paroxysms occur at stated periods—most commonly about bedtime, or immediately after eating.

**TREATMENT.**—A variety of remedies have been used and pre-

scribed for colic in children, such as *soot tea*, *catnip tea*, *saffron tea*, a tea made of the *seeds of parsley, dill, fennel, caraway, coriander, and anise-seed*; all of which frequently fail, and none of them remove the cause. *Paregoric, laudanum, &c.*, have been used in their turn; these always give ease for the time being, but leave the sufferer liable to a return of the disease.

Colic in children is generally produced by something which they have taken that is indigestible, or the souring of the milk on the stomach. In either case, it will be necessary to remove the offending cause; for which purpose, a purgative should be given, which, however, may be premised by an injection of sweetened water, with a tea spoonful of the tincture of *asafœtida* in it. Then give a dose of *castor-oil*, or of the *sirup of rhubarb*; or, in case of any fever having been produced by the colic, a few grains of *calomel* may be given, which may be followed by oil, or *magnesia*, till the bowels are freely evacuated. The warm bath will frequently relieve the child in a few minutes.

When the system of the mother is out of health, it should be restored, and her diet properly regulated. *Dr. Dewees* relates a case where the mother had suffered from toothache for some time before her infant was born, and continued to suffer from it for six months after. The consequence was, that her infant became so emaciated from constant colic that it was at this age a skeleton, and all the remedies he could use availed nothing towards a cure, till he accidentally ascertained the condition of the mother, and learned the previous facts. He advised the immediate extraction of the tooth, which was accordingly done; and from that day the child began to improve, and became fat and hearty.

For the radical cure of colic, the diet of the mother and child should be strictly attended to, and the following medicines given when the child is oppressed with wind:

*Recipe*: *Magnesia*, twenty grains.  
*Laudanum*, twenty drops.  
*Tincture of Fœtida*, one dracm  
*Water*, one ounce.

**Mix.** Twenty drops of this mixture may be given, in sweetened water; and if the child is not relieved in fifteen minutes, ten drops more may be given. This is a dose for a child two weeks old; and it must be increased, according to the age of the child. The medicine should be given as soon as the first symptoms

make their appearance. Once or twice a day, a tea spoonful of warm sweet oil may be given, which will keep the bowels open. Children seldom have the colic after they are ten or twelve months old.

Some mothers and nurses have adopted a practice of jolting and shaking their children on their knees, or thumping them on the back, with a view to break the wind from the stomach. This is most brutal treatment, and cannot be too severely condemned. The stomach and bowels are distended with wind to such a degree as to cause great suffering from even the slightest movement. What torture, then, must result from this pounding, and jolting, and shaking, which is resorted to so generally as a mode of relief!

## SORE EYES.

There are various causes that will produce this disease. Exposing the eyes of a young infant to too strong light will, in almost every instance, have this effect. But there are other causes, of a more serious nature. They are *gonorrhœa* and *leucorrhœa*; and the matter of either of these diseases will cause the most violent sore eyes. When the gonorrhœal or leucorrhœal matter has found its way into the eyes of an infant, we shall discover it in ten or twelve days after birth; the eyelids swell, and are partially glued up in the morning, and when the lids are opened, some purulent matter will escape from them. The inflammation increases, till the ball of the eye is affected; and when the lids are opened, after softening them with water, the eye seems to swim in pus, and the ball can no longer be seen. The parts of the inner lids that can be seen are of a scarlet red, manifesting an intense degree of inflammation, which, if not speedily cured, will destroy the organ of vision, and total blindness will be the result.

**TREATMENT.**—The *first* form of this disease, being produced by too strong a light, may be cured by keeping the child in a dark room, and washing the eyes with a mucilage made of the pith of sassafras sprouts, or slippery-elm tea, or breast milk.

The *second* form of the disease is produced by the matter of *gonorrhœa* or *leucorrhœa* getting into the child's eyes as it passes the birth. It is not an uncommon occurrence for ladies of the first respectability to have leucorrhœa; but only those of a loose character have gonorrhœa, except by the incontinence of their



husbands. Let the matter be produced as it may, the remedy for the sore eyes caused by it is the same.

When a child is born under these circumstances, the eyes should be freely washed, for fifteen or twenty minutes, with warm water, and then kept from an exposure to a strong light, for fifteen days. Some light inflammation may take place, but it will yield to the first remedies. But when this precaution is neglected, and the eye inflames, and suppuration takes place, the treatment must be of the most active kind. After bathing the eyelids with warm water, and discharging as much of the matter as possible, three or four leeches should be applied on the lids of each eye, and allowed to draw freely. After the bleeding from the bites ceases, the child should be kept in a dark room, and the following wash may be used :

*Recipe :* Sugar of Lead, two grains.  
Rose Water, one ounce.

Mix, and bathe the eyes frequently with it. After the use of the eye-water, the mucilage of the sassafras should be used, and the eyes should be kept open and free from matter. The bowels must be kept open with the following medicines :

*Recipe :* Calomel, four grains.  
Magnesia, ten grains.

Mix, and divide in eight papers, and give one every four or five hours, so as to keep the bowels freely open.

If this does not greatly abate the inflammation in forty-eight hours, the leeches must be again applied to the temples ; and as soon as the violence of the inflammation is overcome, blisters should be applied to each temple, which may afterwards be dressed with,

*Recipe :* Basilicon Ointment, one ounce.  
Pulv. Savin Leaves, one drachm.

Mixed. This may be used twice a day, and the sores kept running till the eyes are well. At this time, the following eye-water may be used :

*Recipe :* White Vitriol, one grain.  
Rose Water, one ounce.

Mix. The eyes should be washed with this, four or five times a day. If the matter cannot be conveniently removed from between the eyelids, a small syringe should be used, and warm water thrown in between them, three or four times a day ; and this should be continued till the eyes are well.

A word to mothers who know that they are laboring under

leucorrhea. When first taken in labor, you should wash the vagina out clean, with mild soap and water, and rinse the parts with clean warm water. A womb syringe should be used for this purpose.

## ULCERATION OF THE MOUTH.

When this disease attacks an infant, it is first discovered by a free flow of saliva, which passes from its mouth; and, upon examination, small sores will be discovered under the tongue, and these gradually extend to the gums, but rarely reach the top of the tongue. The sores are deep in their base for the size of their surface. The child frequently refuses to suck, in consequence of the pain it suffers from them; it will lay hold of the nipple, but immediately let go and fret, and it always has more or less fever.

**TREATMENT.**—The first remedy to be used is that which removes the fever; after which, topical applications should be made.

*Recipe:* Calomel, six grains.  
Magnesia, ten grains.

Mix, and divide into six powders. Give one, in sirup, and repeat every three hours, till the bowels are freely purged.

Then use the following wash:

*Recipe:* Blue Vitriol, ten grains.  
Peruvian Bark, two drachms.  
Gum Arabic, one drachm.  
Honey, two drachms.  
Water, three ounces.

Mix, and with a camel's hair pencil apply this to the sores twice a day. This generally heals them in a few days.

There is another form of sore mouth to which children are subject at the age of teething, and especially when cutting their back teeth. The gums become very sore, especially if several teeth are about to make their appearance at the same time. They become purple, and the child drules constantly; its breath is offensive, and there is apt to be more or less difficulty in swallowing. The teeth that are cutting at the time soon decay, and those that were through before become injured. In this disease, purge the child gently with the following medicine:

*Recipe:* Magnesia, half drachm.  
Rhubarb, ten grains.

Mix, and divide into four powders. Give one, in sweetened water, and repeat every three hours, till they purge freely; after which, the following wash should be used:

*Recipe* : Oak Bark, one ounce.

Boil to a strong decoction, and wash the mouth with it freely and frequently; or the following preparation will serve the same purpose :

*Recipe* : Tincture Myrrh, half ounce.  
Chloride of Soda, two ounces.  
Rose-Water, two ounces.

Mix, and wash the mouth freely with it. The child should live on a light diet; and in every instance the gums should be freely scarified, so as to let the teeth come out quickly.

#### MILK SCALD, OR CRUSTA LACTEA.

This disease never shows itself before teething, and never continues after all the teeth have come through. Hence, it is properly classed among the diseases of dentition. It usually begins near the centre of the forehead, or on the cheek, and its first appearance is that of small whitish particles on a red surface. These pustules change to a red or brown, and break, and form a scab of greater or less density, from which proceeds a copious discharge. New pustules soon form, and spread, till, in some cases, they cover the whole face, neck and shoulders, and sometimes the body, except the nose, on which, as well as on the eyelids, we have never known them to form.

The surface which this disease will cover is very uncertain; sometimes it is confined to a small space, and again we see it cover the whole body, although it is not frequently so extensive. When the scab drops off, the surface is red and tender, and has the appearance of being marked with small fissures, which, however, leave no scars. The itching caused by it is intolerable. The child frets day and night, loses its appetite, and wastes away. But the disease is generally considered more alarming and troublesome to the mother, than dangerous. Yet it has proved fatal, and may, of course, be so again. When it is cured, or gets well spontaneously, it leaves no scars. Many varieties of this disease may be found, but these are the general symptoms.

**TREATMENT.**—The treatment of this disease should always be commenced with purgatives.

*Recipe* : Milk of Sulphur, two drachms.  
Magnesia, two drachms.

Mix in three powders. Give one, in sweetened water, night and morning. This should be continued for at least a week.

and, at the same time, the sores may be anointed with *cold cream*, or the following ointment :

*Recipe* : Parsley Tops, one ounce.  
Sweet Cream, three ounces.

Stew them slowly together, till the strength is extracted from the parsley, and anoint the sores with the ointment\* two or three times a day. After using the above medicines a week, give the following powders :

*Recipe* : Calomel, twelve grains.  
Prepared Chalk, twenty grains.

Mix in twenty powders. Give one, morning and evening, in molasses or sirup; or, if necessary, vary them so as to operate two or three times each day. The use of the cream ointment should be continued till the inflammation is removed, when the following preparation should be used :

*Recipe* : White Precipitate, one drachm.  
Simple Cerate, one ounce.  
Otto of Roses, ten drops.

Mix properly, and anoint the sores, three times a day, washing them off, each time, with mild soap and water, before the ointment is reäplied. If this fail, try *Dr. Dewees'* preparation, which is,

*Recipe* : Calomel, two drachms.  
Simple Cerate, one ounce.  
Essence Lemon, twenty drops.

Form an ointment, to be used as above ; and when this fails, he uses the tar ointment.

*Recipe* : Tar, two ounces.  
Fresh Butter, two ounces.

Simmer them together, and apply to the sores, as above directed. Bathing, in every stage of this disease, is of great service. The best bath is made of flax-seed tea, and should be repeated every night.

*Diet.* If the child be at the breast, it should take less than usual, and the mother should take medicine to cleanse her stomach well. She should then live on a mild or vegetable diet, or bread and milk. If the child be weaned, it should live on rice, sago, arrow-root, gruel, a little milk, &c., but not one mouthful of meat, butter, or gravy, in any form, should be used.

It requires the strictest attention to cure this disease in one month ; and if these rules be neglected, a cure need not be expected, till the child has cut all its teeth ; if, indeed, it should live so long.

## TOOTH-RASH.

This disease always makes its appearance when the teeth are coming through, and hence it is called *tooth-rash*. It attacks different parts of the body, in small pimples, which look not unlike the red gum of infants at a few days old, except that it is not so livid, and the pimples are smaller and more crowded together. It troubles the child by the itching which it creates, and at times there is a little fever attending it.

TREATMENT. — If the bowels are disturbed, a full dose of *magnesia*, or a little rhubarb, may be given. The child should be bathed in lukewarm water, wiped dry, and starched all over. It should wear linen next the skin, if the weather be warm, live on a light diet, and in a few days the disease will disappear, by falling off in thin, branny scales.

## SORE EARS.

During the period of teething, and sometimes before this takes place, children are subject to an eruption behind the ears, to which those that are fleshy are more liable than those that are lean. The first appearance of this disease is not unfrequently like a chafe or scald, and there is, perhaps, no disease that is cherished with more care than this. It grows out of a false idea that a discharge from the ear relieves the child from the ill humors that are lurking in the system; and, consequently, the sores are irritated and made to discharge more freely, till presently they become foul, ill-conditioned, and secrete a large quantity of serum and unhealthy pus. But we lay it down as a correct rule, that no sore anywhere on the body is conducive to health; and therefore they should be cured as quick as possible.

TREATMENT. — When the abrasion is first discovered behind the ear, instead of being encouraged, it should be immediately washed with a little milk and water, or the mildest kind of soap, and then wiped dry. This should be repeated as often as the serum is discharged, and the sores become wet, if it be half a dozen times a day. After being washed, the sores should be dressed with the following ointment :

Recipe : Bees-Wax, half ounce.  
Hog's Lard, half ounce.

Melt them together, and apply a dressing, on soft linen, so as to cover the sore completely. If the child be disposed to scratch



the sores, its fingers should be muffled. The following medicine should be given :

*Recipe :* Calomel, ten grains.  
Magnesia, thirty grains.

Mix in ten papers, and give one, night and morning, in sirup, so as to procure two or three operations from the bowels every day. After the inflammation is removed, the following ointment should be used :

*Recipe :* Calomel, one drachm.  
Simple Cerate, one ounce.

Mix them properly, and dress the sores with the compound, morning and evening, and let the plaster extend over the sore, and cover a part of the sound skin. The washing with the soap and water, before each dressing, should be continued, and the child must still live on a vegetable or milk diet.

Diseases of the brain, often fatal in their result, are frequently produced by excessive and extensive inflammation, of which *sore ears* is the cause. Let mothers, then, act rationally, and heal these sores in the outset, and thus prevent the long train of bad effects that so often results from this neglect.

When the dressings are applied to the ears, if *both* be sore, the child should sleep on its back, and wear no cap, in order that the head may be kept cool.

#### OF TONGUE-TIE.

There are two distinct ways by which the tongue is tied ; or, in other words, two distinct membranes which tie that organ down. One is the natural frenum, and the other is an unnatural, thin membrane, which extends beyond the continuance of the frenum, and fastens itself to the point of the tongue. This membrane is almost transparent, while the unnatural continuation of the frenum is fleshy and much thicker. Both prevent the child from sucking with ease, and their effect is to make it cluck and swallow wind, and, when grown, to lisp.

**TREATMENT.** — The thin membrane is to be clipped with a pair of sharp scissors, or gum lancet ; and the mode of operating is this :

Place the child's face in a fair light ; put the point of your little or fore finger under its tongue, and raise it up, and then, with a quick, but dexterous stroke, clip this membrane down to the frenum. It will not bleed more than one or two drops.

The cure of the other, or thickened frenum, is the same, but great care should be taken to prevent hemorrhage, for some important blood vessel may be divided. If this should be the case, the child may be strangled by the blood, or, by sucking it, may swallow the point of the tongue, and suffocate. The remedy is, to bring the tongue forward with the finger or a spoon-handle as soon as possible, and touch the bleeding vessel with caustic or burnt alum. This soon arrests the bleeding, and the wound quickly heals.

## DISEASE OF THE HIP JOINT.

This disease is often suffered to progress for the want of a knowledge of its location. It is most frequent in children, and is generally caused by a strain, bruise, or anything that may give the joint a severe wrench. The child first complains of pain in the knee or knees, and the parent supposes the joint to have been slightly strained, and that it will soon pass off, as there is no swelling to be perceived, and no pain is experienced when the limb is touched. Still, however, when it attempts to walk, the child cannot bear its weight on the affected limb, and is apt to set that foot a little before the other when it stands up. The reason of this is, that that limb is longer than the other, from a thickening of the membranes covering the head of the thighbone, and lining the cavity in which it rests. The child may have general fever, with a quick pulse and white tongue; or it may have but little fever, and the tongue may look healthy and natural.

The only certain method of finding out the location of this disease, is to lay the patient flat on his back, and flex the knee, by setting the foot up near the *nates*, and then, with the edge of your hand, to give the knee a sudden stroke, just at the lower end of the knee-cap; and the patient will complain of the hip joint which lies nearest the surface, about the middle of the groin.

When this disease progresses, inflammation extends to the surrounding muscles, and abscesses form; sinuses are produced; ill-conditioned pus is thrown out, with a briny bloody sanies; the bones become affected; the head of the thighbone ulcerates and is discharged, or it is thrown out of its socket, and passes upwards and backwards. This shortens the leg, and turns the toes inwards. But the head of the thighbone may be thrown

inwards, and lodge in the foramen of the pelvis; and this will make the leg too long, and turn the toes outwards. The cavity for the lodgment of the head of the thighbone may be absorbed, and the head and neck of the bone slip through, and rest upon the *trochanter* of the thigh, and then the leg is too short, and the toes are only permitted to reach the ground. This is a formidable disease, and should be early and strictly attended to.

TREATMENT. — It is almost always the case that time is lost by parents addressing some remedies to the knee, supposing that it is a strain or rheumatism with which the child is afflicted. Indeed, there are many physicians who mistake this disease, and are not undeceived till it is too late to apply the proper remedies.

When a child first begins to complain of pain in the knee, and no swelling or soreness is found there, it should be immediately tested in the way we have directed; and if there is the least pain produced in the hip by this proceeding, it may be regarded as certain proof of the nature of the disease, and no time should be lost in using the proper remedies.

If the pulse be full, hard, or quick, and the skin hot, the patient must be bled freely from the arm. He should then be placed on a mattress or straw bed,—but *on no account* on feathers,—upon his back, and, in this position, his legs must be straightened, even if it should hurt. If he cannot keep them straight, the following treatment must be pursued: Let a handkerchief be passed around his chest, under his arms, and another through that, and around the head-board or rail of the bedstead; let a fillet be then passed around his ankle, and around the foot-board or rail, and draw the limb straight. This would seem to be a barbarous practice, but it is better that the child submit to it now than be a cripple for life; if, indeed, he does not lose his life.

He must now take the following medicine:

*Recipe:* Cream Tartar, one drachm.  
Pulv. Jalap, half drachm.

Mix, and divide into six papers, for a child six years old. One of these should be given, morning, noon and night, in sweetened water, or just as many as will give him three free passages a day. When the medicine operates, he is to be again placed in his straight position.

If the hip swells much, cups should be applied over it, or fifteen or twenty leeches on the swelling, as near over the joint as possible; and this, as before stated, is nearest about the middle

of the groin. This should be succeeded by a free bathing of the whole hip with vinegar and water, a little warm, which should be repeated three or four times in twenty-four hours. Some have recommended issues to be put on the hip, but we have never seen any good derived from them. The purging, bathing, leeching, position, and low diet are the remedies. No article of diet should be taken that has the smallest portion of grease in it; no animal food, of fish, flesh or fowl, nor soups of any description, butter, nor sweet milk, should be allowed. On the contrary, either gruel or rice, potatoes, tea, light bread, soft toast, made with warm water, arrow-root, sago, mush and molasses, &c., should constitute the food, and the drink should be pure water only.

Perseverance in this course will cure the disease in from ten days to two months, if caries of the bone have not taken place before it is begun. If such be the case, six or twelve months may be required to effect a cure. As strong contractions must have taken place, splints and bandages must be used, and various remedies applied, which require the aid of a skilful physician. Such an one, therefore, must be called in.

## ABSCESS WITHIN THE EAR.

Children from the age of six months and older are sometimes found to cry and toss themselves from side to side, giving to their head a variety of unnatural motions. They scream most violently for some minutes, fall into a sleep for a short time, and awake in a like paroxysm of pain. At times the child has a light fever, at other times it has none.

This disease is generally thought to be colic by the mother or nurse, but is easily distinguished from it by the child's not drawing its knees up towards its abdomen; neither are the hands and feet cold. If pressure be made upon the lower part of the ear, near the orifice, pain will quickly be produced; and by looking into the ear, we can very often discover the swelling, and too frequently see that matter has already formed. When the abscess breaks, the matter flows out freely, and the child is relieved for a while; it falls into a sleep, and awakes free from all pain; but is doomed to suffer a renewal of this process several times within a month, till at last inflammation seizes the bones of the ear, and exfoliation takes place, and if death is not produced by the disease finding its way to the brain, deafness will be the final result.

**TREATMENT.**—It is too often the case that the remedies proper for the removal of this disease are not used till it is too late to effect a cure. When, however, it is apprehended in time, the ear should be filled with a small plug of wool or cotton, wet with laudanum; and this application should be frequently repeated. If the child has much fever, it should be bled, and the following medicines given, for a child six months old :

*Recipe :* Calomel, six grains.  
Magnesia, twenty grains.

Mix, and divide into six powders; give one, three times a day, in a little sirup, and repeat the next day. Three or four leeches should be applied under the ear.

If the disease should not yield in two days, a small blister may be applied under the ear, instead of re-leeching. Sometimes two or three drops of the juice of a roasted onion, squeezed into the ear, will give immediate relief; and the onion may also be roasted and mashed fine, and applied to the ear in the form of poultice. If this should not cure it in the first stage, and it breaks, or has broken before you are apprized of the nature of the disease, you must then cleanse it with the following wash :

*Recipe :* Lime Water, two drachms.  
New Milk, half ounce.  
Tincture Myrrh, half ounce.

**Mixed.** This will be enough for one application, and should be thrown into the ear with a syringe, so freely as to wash it out perfectly. It should then be rinsed out with fine soap and water, and three drops of the following mixture should be dropped into the ear after each washing :

*Recipe :* Tinct. Myrrh, half drachm.  
Sweet Oil, half drachm.

**Mixed.** Shake the vial well, and drop three drops into the ear, which must be stopped with wool or cotton.

If the bones of the ear should become so diseased as to exfoliate, or loosen and come out, nothing can prevent a partial, if not an entire, loss of hearing. The bowels should be kept open with gentle medicines, and the diet, if the child be weaned, should be entirely vegetable.

#### ADHESION OF THE LABIUM PUDENDI OF CHILDREN.

This misfortune is more frequent than we might suppose, from the first thought on the subject, seeing that nurses and mothers are both anxious about these parts, and are apt to inspect them



closely, to see if they are perfect. From this fact, we are led to believe that this disease is not often congenital, but is the result of accident or neglect after birth. This adhesion is produced as follows: the parts become chafed or galled with acrid fæces or urine, or both; by being neglected, they become raw, inflammation takes place, and adhesion follows. This may not be discovered for months, or years, if a careless mother or nurse have the management of the child. Indeed, it sometimes passes on till the girl has grown up, and, at a time when she would wish above all others to be perfect in these parts, she is found to be in this condition. Consequently, notwithstanding the death-like mortification to which she must be subjected, she is compelled to be exposed, and suffer an operation to be performed for her relief.

When this adhesion exists, the urine is always passed with some difficulty, and the menstruous fluid has to find its way through the small external opening through which the urine passes; for the whole external meatus of the vagina is closed, and is perfectly smooth, with only a threadlike seam where the labia have been closed together.

TREATMENT.—There is but one remedy, and that is to divide the labia by an operation.

Some advise this to be performed by tearing the labia apart, and others advise the use of the knife. There is no reason to hesitate between them, and the use of a sharp-edged instrument offers the remedy.

The operation is performed by passing a probe-pointed bistoury down from the orifice of the urethra to the lower part of the meatus of the vagina, and carefully and correctly dividing the labia. The parts should then be dressed with lint and sweet oil, to keep them from growing together again; and, in a few days, the wound heals, and all is well. Mothers should examine these parts of their daughters frequently, in order that no such accident may happen.

#### FECULENT DIARRHŒA.

Children under two years and a half old are especially liable to this complaint. We shall cease to wonder at this, when we recollect the great length, sensibility, and irritability of the alimentary canal; the various parts with which it almost constantly sympathizes, as the liver, the skin, the lower extremities, the brain, and the gums during teething; and the immense surface it presents to be acted upon by the variety of substances received into

it. (*Dewees.*) Whatever, therefore, is capable of increasing the peristaltic motion may contribute to the production and continuation of this disease.

This form of diarrhœa may be created by agents acting directly and indirectly; and for the first cause, we enumerate improper diet of all kinds, or even too much of that which may be good when taken in proper quantities. Unhealthy milk or animal food may produce this disease, and anything that is disposed to ferment, and especially if that process be about to take place when the diet is taken. When food of this description is taken into the stomach, the bowels act quickly, in order to throw off the offending substance, and a diarrhœa is induced; the fæces are undigested, and of course feculent. The bowels are thus irritated, and prevented from performing their functions in a healthy manner.

This form of diarrhœa is almost always attended with some nausea, and more or less pain. There is, generally, more or less acid on the stomach, with occasional accumulations of wind; and, sometimes, there is fever to a greater or less degree. This disease sometimes continues till the flesh of the little patient is literally wasted off its bones, and it becomes a mere skeleton. These discharges work at times like yeast, and again they are as thin as water, and in every instance are extremely offensive to the smell. They are sometimes so acid as to excoriate the skin.

TREATMENT.—The kind of medicine we give in this form of diarrhœa is a matter of great importance. If the discharges are acid and acrid, we should give the following:

*Recipe:* Magnesia, one drachm.  
Pulv. Mace, six grains.

Mixed. Divide into six powders, for a child six months old, and give one every four hours, in a small quantity of sweetened water, till they have operated freely. This may be known by the color and smell of the discharges being changed. If these fail, give the following:

*Recipe:* Magnesia, twenty grains.  
Pulv. Rhubarb, twelve grains.  
Pulv. Mace, three grains.

Mix, and divide into six powders, and give them as above. Should they not check the discharge, they will destroy the acid. We must then give the following:

*Recipe:* Calomel, twelve grains.

Divide into six powders, and give one every two hours, in a few drops of simple sirup, till they operate freely. They will produce a green or dark discharge, with but little or no smell.

If the bowels continue relaxed, and the passages too frequent, give the following drops :

*Recipe :* Pulv. Mace, one drachm.  
Nutmeg, two drachms.  
Cloves, two drachms.  
Cinnamon Bark, four drachms.  
Race Ginger, two drachms.  
Pulv. Rhubarb, one ounce.

Boil all these in a pint of water, down to a half pint; strain them; add half a pound of loaf sugar; simmer till all are reduced to a perfect sirup, and then add half a pint of old rye whiskey. This is called the aromatic sirup; of which, when the bowels are relaxed and the passages are frequent, after the child has been sufficiently purged, to one six months old, give a tea spoonful in water, and repeat every two, three, or four hours, as the case may require, till the bowels receive tone, and the discharges become natural. Occasionally, however, if much derangement exists, a dose or two of calomel must be given.

*Diet.*—This is a matter of the greatest importance. If the child be at the breast, no other diet should be given, and *that* not in too full portions. If it is a weaned child, all animal food must be taken from it. Scalded milk, with two table spoonfuls of lime-water to half a pint, and a small quantity of sugar, should compose its diet. Occasionally, a little well-boiled rice, arrow-root, gum-Arabic water, sago well boiled and sweetened lightly, or the crumbs of bread mashed very fine, and made soft with cream and a little sugar, will be good.

*The dress is important.* The skin should be kept clean, and flannel should be put on next the skin; shoes or socks should also be worn. The child should be carefully taken out into the pure air, but it should not be exposed to dampness. The bed-chamber should be ventilated, but a cold current of air should not strike the child while asleep, especially if it is in a perspiration. Great care should be taken to remove its diapers, or under-clothes, as soon as they are wet or soiled; and they should not be put on a second time, till they are washed and well aired. As soon as the child is able to bear it, exercise on horseback, or in the baby's carriage, cautiously and properly used, will be of service. It should never be allowed to take hearty drinks of cold water; and for a drink, water that has been boiled and cooled will be better

for the child than common cold water. When the disease is slight, and no fever or acid exists, a dose or two of castor-oil, without any other medicine, will cure it, if given in time.

#### OF BILIOUS DIARRHŒA.

The name of this disease in part describes it. The bowels are stimulated into inordinate action by an overcharge of bile; the fæces are loose, copious, and of a green or yellow appearance; and this bile may be more or less vitiated. This form of diarrhœa makes its appearance only in warm weather, and has obtained the name of *summer complaint*.

The influence of heat upon the skin is well known. It stimulates the liver into increased action, and consequently more bile is secreted, and, if the organ be sound, in order to relieve itself, it throws it off in greater or less quantities. Grown persons will observe this in their own case, especially after a hot season, succeeded by a damp or moist atmosphere.

In this form of diarrhœa, in children, the stimulus of the bile increases the action of the bowels, and they, in some cases, relieve themselves from the disease. On the other hand, fever is sometimes provoked by the inordinate quantity of bile, and the child may be placed in a dangerous situation.

Teething rarely produces this complaint, though it may be aggravated by it.

This, as well as all the diseases of the bowels of children, is aggravated by improper diet, as well as by exposure of any description.

**TREATMENT.** — The remedies for this disease are suggested by the disease itself. The bowels must be evacuated, and that by such medicines as exercise a decided influence on the liver. The first thing, therefore, to be done, is to give the following powders, for a child six months old :

*Recipe :* Calomel, twelve grains.  
White Sugar, twenty-four grains.

**Mix.** Divide into six papers, and give one every two hours, wet with a few drops of water, till they operate freely three or four times. This must be repeated, every day, till the fever is overcome, and the discharges are of a consistent character. They may be so, and yet be green; and if they are of a pea-green color, the calomel must be continued till they are of a deep

or dark green, with some specks of mucus in them. The following powders may then be given :

*Recipe:* Calomel, three grains.  
Rhubarb, twelve grains.

Mix, and divide into six powders, and give them as above directed, till the discharges are consistent and yellow. If the child is restless at night, and has a fever, a tea spoonful of the following mixture may be given, in sweetened water :

*Recipe:* Magnesia, twenty grains.  
Tinct. Fœtida, one drachm.  
Laudanum, forty drops.  
Water, one ounce.

Mix. Shake the vial well before you pour out the medicine. If the child has much fever at any time,

*Recipe:* Spirits Nitre, half ounce.

Give ten drops in a little lukewarm water, and repeat every hour till the fever is subdued ; but if it should return, give them again, in like manner.

The diet is very important in this disease. If the child is not weaned, it should live on the breast alone ; if weaned, the diet should be light, and composed of such articles as rice, milk and water, light bread boiled in water and sweetened lightly, arrow-root, sago, rennet whey, rice-water, or well-boiled gruel.

The clothing should be adapted to the season of the year and the temperature of the atmosphere. The room should be well ventilated, but a draught of damp air should not be suffered to pass over the child. Slippery-elm tea will be a good drink during convalescence.

#### OF MUCUS DIARRHŒA.

This form of diarrhœa is produced by a sudden check of perspiration, exposure to wet or dampness, too light clothing in damp weather, the cold bath, or any other cause that will produce a sudden check of perspiration. The discharges always show more or less mucus, before and after the true evacuation. They are sometimes colored a little green, and may be tinged with blood.

There is rarely any pain with this disease, though there is pain, and more or less tenesmus, with a disposition to strain when at stool. Vomiting rarely presents itself in this disease ; and it is, perhaps, the only form of diarrhœa to which children



are subject, in the production of which the teeth are not accused of having some active part.

TREATMENT.—The cure of this disease should always be commenced by giving a gentle purgative.

*Recipe* : Simple Sirup of Rhubarb, one ounce.

Give a tea spoonful every two hours, to a child six months old, increasing or diminishing the dose, according to its age, till free evacuations are produced. If there is much straining after this, give an injection made of starch, containing ten drops of laudanum; and this may be repeated as often as the straining returns. After the bowels have been freely evacuated by the sirup of rhubarb, a dose of castor-oil may be given.

*Recipe* : Castor-Oil, half ounce,

A tea spoonful every two hours, till a free operation is produced, will be sufficient. If blood still appears with the evacuations, give :

*Recipe* : Calomel, six grains.  
White Sugar, ten grains.

Mix. Divide into six powders, and give one every two hours, till they operate well; after which, the bowels should be kept open with rhubarb tea, sweetened.

The drink should be slippery-elm tea, or gum-Arabic water.

The injections are important, and should be frequently used. Let the skin be kept comfortably warm, and avoid all exciting causes.

#### OF CHYLOUS DIARRHŒA.

It would seem that this disease has for its cause a different secretion from the liver, as the discharges are white or milky in their appearance. Thin white fluid is chyle; and hence the name, *chylous diarrhœa*. The bowels are always loose, the passages frequent, though not generally smelling badly.

The child laboring under this disease rapidly emaciates, because the chyle is not taken up by the lacteal vessels; and hence, there is a deficiency of nourishment for the maintenance and growth of the system, and the muscles, therefore, waste away. The skin becomes loose and flabby, the eyes sink in their sockets, the abdomen becomes flaccid, and the whole system seems to yield to the rapid influence of the disease, which, if not speedily relieved, must inevitably prove fatal. But it does so because of the want of nourishment, since nothing which the child takes into the stomach is properly digested.

**TREATMENT.** — The liver seems to be the great defaulter in this disease, and our remedies must, therefore, be addressed to that organ.

In order to obtain what we desire, in this case, we must free the stomach from everything that would hinder its proper and healthy action; and, therefore, no kind of diet that can possibly offend, or require more of the digestive powers than it is able to afford, should, on any account, be given. Small quantities of rennet whey, or gum-Arabic water, will be the best diet for the first week; or a small quantity of scalded milk, with one sixth its quantity of lime-water, which may be lightly sweetened. will serve as well.

The medical treatment should be as follows:

*Recipe:* Blue Mass, ten grains.  
Rhubarb, ten grains.  
Pulv. Opium, quarter of a grain.

Mix, and divide into ten powders; give one, in a little sirup, every two hours, till yellow bile is discharged from the liver.

*Recipe:* Calomel, six grains.  
Pulv. Mace, four grains.

Mix, and divide into twelve powders; give one as in the previous direction.

If the child does not rest well at night, give the following injection:

*Recipe:* Starch, made thin, two ounces.  
Laudanum, ten drops.

Mixed. This may be repeated every night. The above powders may be repeated every day, so as to produce one or two evacuations daily; and, after the liver acts freely,

*Recipe:* Sirup of Green Persimmons, two ounces.

A tea spoonful should be given every time the child has a passage, till they are reduced to two or three in twenty-four hours. Then, the following drops may be given as a tonic:

*Recipe:* Huxham's Tincture, one ounce.

Give fifteen drops, three times a day, in sweetened water; and, at the same time, the tepid bath, with salt in it, once a day will be profitable. Keep the child in the bath five minutes, and rub off with a dry towel. Flannel should be worn next the skin, and socks on the feet.

The food is only to be increased as you find the stomach will properly digest it. Exercise in the open air, when the weather is warm and dry, will be serviceable.

## OF LIENTERIC DIARRHŒA.

“The rapid passage of the nearly unchanged aliment through the bowels constitutes this species of diarrhœa.” It not unfrequently follows the other species of that disease, but perhaps more frequently succeeds to dysentery.

This complaint may exist in different degrees, and rarely comes on suddenly. The first indication of it is the passage out of the system, in a short time, and undigested, of the food just taken into the stomach. Small portions of apples, potatoes, or other articles of diet, may be seen, perfectly sound, in the digestions, in an hour or two after they are swallowed, and when this is the case, we may regard the disease as fully formed.

The child may vomit occasionally; is griped, and cries from pain; the urine becomes small in quantity, and smells badly; the hands and feet are apt to be cold, and the thirst is increased. The disease is generally brought on by improper feeding, or exposure, and perhaps both; but especially feeding. There is, occasionally, a mixture of bile in the stools, but generally there is rather a deficiency of it; evidently showing that the liver is somewhat in fault.

**TREATMENT.**—We commence the cure of this, as of chylous diarrhœa, that is, by letting the child have no more diet than will sustain it. If at the breast, it should take nothing but breast milk, and that in small quantities, and not oftener than once in three or four hours.

*Recipe:* Calomel, twelve grains.  
Pulv. Mace, three grains.

Mix, and divide into six powders; give one every four hours, in a drop or two of sirup, and repeat till the operations show that the medicine has acted on the liver.

The stomach is evidently much in fault in this disease, and requires something to give it tone. As soon, therefore, as you have properly evacuated the bowels, if there is no fever, the aromatic tincture may be given, as prescribed in feculent diarrhœa, and in the same quantities, according to the age and strength of the patient.

If the recovery be slow, the abdomen may be rubbed with tartar emetic ointment.

*Recipe:* Tartar Emetic, one drachm.  
Hog's Lard, one ounce.

Mix them well together, and rub on the abdomen, morning and

night, a portion of this ointment as large as a hazle-nut, and continue till the eruptions come out pretty freely. Dress the sores with simple cerate.

The child should be taken out in the open air, evening and morning. Yarn stockings and flannel should be worn next the skin, and, as the strength and digestion improve, the diet may be increased.

## CHRONIC DIARRHŒA.

The several species of diarrhœa just treated of may run into this form, by neglect, bad treatment, or an improper diet. It is a most formidable species, and most commonly occurs after weaning, though it may, and does occasionally, occur before. It more usually attacks in the summer and fall months than at any other season of the year.

The discharges are frequent, generally tinged with green, and sometimes fetid. The child is sick at the stomach, retches frequently, and sometimes vomits; is thirsty and feverish, peevish and fretful; though this is the effect, more or less, of pain, which constantly attends this disease. The fæces are mutable, being sometimes bilious, sometimes healthy in appearance, and sometimes undigested.

This disease may run on for six or eight weeks before it proves fatal; but in some cases, death may be produced in half the time, by a transition, by sympathy or otherwise, to the brain, when convulsions terminate the case. Excessive vomiting and purging, however, sometimes cause death before the disease runs its usual course.

It occurs most frequently in children that have been weaned at the eighth or ninth month, — a fact of which mothers are so well apprized that they never wean their children at this age except from necessity. It is most frequent in wet, hot summers, and from July to October; and in very dry summers we rarely meet with it in children.

Mothers are apt to neglect diarrhœa when children are teething, thinking that loose bowels will prove an advantage to them; than which, nothing is more erroneous and dangerous. This disease produces singular contractions in the whole length of the alimentary canal. The bowels are frequently folded one part into another, like the folding in of the finger of a glove, and this may be of the extent of from half an inch to two or three inches. The liver is enlarged, and is of a bright-red color; the gall blad-

der is also enlarged, and contains dark green bile. Sometimes the mesenteric glands are inflamed and enlarged, and at others, they present no appearance of inflammation. These contractions and intussusceptions of the bowels are altogether spasmodic, and present no adhesions by inflammation or otherwise, being easily overcome by a slight pressure with the finger.

The evacuations in the advanced stage of this disease are not unlike pounded grass, or some green vegetable floating in a thin, green water; but when the mucous coat of the bowels begins to give way, the discharges are of a brown chocolate color, and extremely fetid. When the liver is much affected, the discharges are of a yellowish, pus-like appearance. Is it any wonder, under these circumstances, that the child should be emaciated and weak?

**TREATMENT.**—After diarrhœa has become chronic, it is always more difficult to cure, because the liver is involved with the intestines in maintaining the complaint; because the stomach and bowels are seriously affected, independently of the condition of the liver; because the irritation is very often kept up by the presence of worms, which are sometimes difficult to remove; and because the influence of habit, added to diseased action, is hard to change. Let these causes be remembered, and the propriety of the treatment will easily be perceived.

If the first stage of this chronic form of the disease alone exists, the discharges are green, slimy, or curdled; the child has loss of appetite, and occasionally vomits; the skin, under the clothes, is dry and hot; the urine is scanty and high-colored; the thirst is great; the child is fretful, whimsical, and sluggish; the flesh shrinks and the child looks badly. In this stage, the bowels must be freely purged with the following medicine, for a child one year old:

*Recipe:* Calomel, ten grains.  
Rhubarb, twenty grains.

Mix, and divide into ten powders. Give one, in a little sirup, every three hours, till they operate freely. After the operation is over if the discharges are green or slimy, give

*Recipe:* Castor-Oil, one dose,

a dessert spoonful, for a child one year old, which may be increased or diminished, according to age.

Should this not bring natural passages, you should then give a tea spoonful of the sirup of rhubarb, every two hours, till the



discharges are corrected and yellow; after which, the diet will generally perform the cure, if properly regulated.

In the second stage, all the symptoms are aggravated; the discharges are of a light pea-green, very thin, and smell badly; there is evidence of much acid in the stomach and bowels; griping pains are experienced, and the child pukes occasionally. The milk, if any be taken, is thrown up in thick, hard curds; the tongue is coated with a thick, white crust, perhaps mostly coagulated milk; the child has more or less fever; is very restless at night; the evacuations are frequent, and the bowels griped. The treatment for this stage of the disease differs a little from that of the first. The following medicine should be given:

*Recipe*: Calomel, ten grains.  
Magnesia, twenty grains.  
Pulv. Opium, one half grain.

Mix, and divide into ten powders, for a child one year old; and give one, in sirup, every three hours, till they operate freely. After the operation is over, give the following:

*Recipe*: Blue Mass, sixteen grains.  
Pulv. Mace, two grains.

Mix, and divide into eight powders, and give one, morning, noon, and night, in a few drops of sirup. If the child be restless, and griped much, give a starch injection, with ten drops of laudanum in it. This may be repeated, every night, at bedtime. After the bowels are corrected, but still weak, and the passages too frequent, give the following:

*Recipe*: Prepared Chalk, three drachms.  
Laudanum, twenty-five drops.  
Oil Cinnamon, one drop.  
White Sugar, two drachms.  
Water, three ounces.

Mix them well together, and give a tea spoonful every two, three, or four hours, as it may influence the operation. This medicine is designed to check the bowels gradually; as soon, therefore, as this result is produced, the medicine must be omitted. If the looseness should return, however, it must be given again, as above directed. If the evacuations are kept up from acrid bile, this medicine will not stop them, but they will become yellow, when the following medicine may be given:

*Recipe*: Calomel, six grains.  
White Sugar, twelve grains.

Mix, and divide into six powders; give one every two hours, till they operate freely. If the child should not rest at night, give

the injection at bedtime; and should it go more than eight or ten hours without a passage, an injection should be given, omitting the laudanum.

During the whole process of the cure, the diet and drink of the patient should be strictly attended to. The drink should be slippery-elm, flax-seed, or marsh-mallow tea, rice-water, barley-water, &c., and these will constitute its principal diet. It may take a little milk and lime-water, in the proportion of two table-spoonfuls of the lime-water to a pint of milk. This may be sweetened with a small quantity of white sugar. Rennet whey, sago, and arrow-root, may be given occasionally. No solid food, or stimulating drink of any description, can be allowed; and if the child is at the breast, its mother's milk alone will be sufficient for it. As it gathers strength, the diet may be made more nourishing.

Rice, boiled till it is dissolved, and milk added to it, or milk and thin mush, a little crumb of bread made perfectly fine, with some sweet cream and a little maple sugar in it, may be given.

The whole body and limbs should be covered with flannel, and socks put on the feet.

The third indication may be answered by vermifuge medicines. If, in spite of the above remedies, the bowels should continue too loose, we may suspect the presence of worms that have eluded the previous efforts to effect a cure, and we may then give,

*Recipe*: Ol. of Wormseed.

Directions for its use are found around each vial; but it must never be given when the child has a fever. Or, the *Carolina pink* may be used instead, and taken in the following manner: Give a quarter of an ounce, to a tea cupful of very weak coffee; boil the pink in the coffee, and add milk and sugar. Let the child make two or three breakfasts of this, and then give a dose of *castor-oil*.

#### OF CHOLERA INFANTUM.

This disease is brought on children by a variety of causes, of which the most frequent are improper diet and clothing, premature weaning, worms, and teething.

It makes its appearance in different ways; and sometimes it comes on as a simple diarrhœa. In its more violent forms, it is attended by vomiting and purging, accompanied with spasmodic symptoms, not unlike those in the cholera morbus of adults. There is an irregular remittent fever, which is always highest in

the evening; the pulse is usually small, quick, and feeble, and sometimes corded, but rarely full and strong.

There are strong symptoms of determination to the brain, even in the early stage of this disease. Stupor, and frenzy, or delirium, are manifested; the eyes are either fiery or languid in expression, and when the patient sleeps they are half open. The thirst is intense, and if cold water be drank, it is instantly thrown up. The head, stomach, and bowels, are hot, and the hands and feet are cold, or cool; the discharges from the bowels are generally thin and watery, with some lumps in them, occasionally tinged with blood and mucus. Their color varies from a green to a white, yellow, or brown; at times they have no smell, but at others they are very fetid, frequently having a sour or putrid smell. The motions are sometimes very frequent, in which case the food is undigested.

The child falls away rapidly, the surface is pale, and the skin soon becomes flabby and livid; and where the weight of the body rests, the skin will frequently ulcerate, and become troublesome with sores. The skin appears as if it were stretched across the forehead, and the eyes are sunken in their sockets; the cheeks are sunken and hollow, the nose is sharp, and the lips are shrivelled. But even under all these circumstances, life will sometimes linger for several weeks, and the patient may, possibly, recover at last.

The belly, in this stage, becomes tumid from flatulency, or is pinched to the backbone; the feet and hands swell, but more especially the feet; an apthæa or thrush appears in the mouth, and the child is so dull that scarcely anything can arouse it. About this time, if we examine the surface closely in a fair light, we shall see a great number of small watery points, like blisters, on the skin; and, if able, the child now shows a disposition to thrust its fingers, or whole hand, into the back part of the mouth; and sometimes a live worm will crawl away from it.

These last signs are all indicative of danger. The cerebral symptoms increase; the discharges become slimy and of a pink color, or thin and greasy; the skin cold; vomitings frequent; the eye becomes suffused with blood, and sinks; the pupil dilates; the pulse is frequent and feeble; and finally, convulsions come on, and the child dies.

This carries us through every stage of this disease, and shows its termination. But cholera infantum is not always of this pro-

tracted character. It may, like cholera morbus, kill in a few hours or days, but it is not generally fatal in so short a time.

**TREATMENT.**—The name of this disease explains in part its character; we, therefore, expect to find the patient laboring under a sick stomach, with more or less vomiting. The first step to be taken, then, to effect a cure, is to allay the irritability of the stomach; and the second, to clear the alimentary canal, and arrest the purging.

There is great sympathy between the rectum and stomach; instead, therefore, of giving emetics or cathartics, in the first instance, as is too often the case, we should commence the cure by an injection. This should be made of thin gruel and salt, in the proportion of a tea spoonful of salt to a gill of thin gruel, and the injection should be thrown as high into the bowels as possible. If it bring away a free discharge from the bowels, the stomach will be partially relieved; but if it does not, it must be repeated till it has that effect. Cathartic medicines must then be used.

*Recipe:* Calomel, six grains.  
White Sugar, twelve grains.

Mix, and divide into six powders, and give one every hour, till they operate freely; at the same time apply a mustard plaster over the stomach, and bathe the feet and legs in warm water.

There is always great thirst; but the child should take as little fluid as possible. If it is at the breast, it should be allowed to take very little at a time; and if it be weaned, it should have a tea spoonful of toast-water every few minutes.

The mustard should be taken off before it draws a blister, and the surface anointed with sweet cream, or sweet lard. We have known a tea spoonful of strong coffee, without cream or sugar, settle the sick stomach very well; and this may be repeated frequently, if necessary.

If the symptoms continue, the same remedies should be repeated, the next day, with the addition of a strong mustard bath to the feet and legs. And should this not give relief, and the extremities keep cold, let a blister be applied on the inside of each leg, to equalize the action on the surface. The warm bath will be found of great service; but it should contain salt or mustard, and the skin should be well rubbed, while in the bath, and, when taken out, wiped dry with a coarse towel. It will

perhaps be necessary to repeat this, once or twice a day, for some days.

If the irritability of the stomach should continue after the above remedies have been used, let a blister be applied over the region of the stomach, or over the whole abdomen; a perspiration is apt to follow, and much good will be the result.

The disease sometimes passes into that stage when a bloody mucus is discharged from the bowels, and then we shall find benefit from the following mixture :

*Recipe :* Castor-Oil, two drachms. —  
Mucilage Gum-Arabic, two drachms.  
Laudanum, two drops.

Mix them well together, and give a tea spoonful every hour, till they operate. After free evacuations have been obtained by this medicine, if the discharges continue to be tinged with blood, give the following :

*Recipe :* Sugar of Lead, two grains.  
Pulv. Ipecac., two grains.  
Pulv. Opium, quarter of a grain.

Mix, and divide into six powders; give one, in sirup, every two hours, till the discharges are changed.

If any fever arise, and the passages do not become natural, in ten hours, give the foregoing preparation of castor-oil, etc., as above directed, till a free operation is produced. This disease frequently passes from this stage to the following: The discharges become watery and green, the stomach is sick, and the child restless. There is an acid on the stomach, which has done this mischief, and the following preparation must be used :

*Recipe :* Prepared Chalk, half drachm.  
Pulv. Gum-Arabic, one drachm.  
Laudanum, ten drops.  
White Sugar, one drachm.  
Water, three ounces.

Of this mixture, give a small tea spoonful, once in two or three hours, till the green discharges are corrected; or, instead of the above, you may give the following :

*Recipe :* Salts Tartar, half drachm.  
Gum-Arabic, one drachm.  
Magnesia, half drachm.  
Oil Cinnamon, one drop.  
Paregoric, thirty drops.  
Pure Water, three ounces.

Mix, and give as above directed. When the sickness at the stomach is allayed, and these thin, green discharges checked



then, in order to correct the action of the liver, give the following:

*Recipe:* Calomel, three grains.  
Rhubarb, eleven grains.

Mix, and divide into six powders. Give one every two hours, till you have procured a free operation; and then, to keep the bowels open, the spiced sirup of rhubarb should be given. A tea spoonful of this, two or three times a day, will be sufficient.

When great debility remains, a tonic is sometimes necessary; and *Dr. Chapman* says, "the chalybeate is the best." It is given in this form:

*Recipe:* Copperas, two grains.  
Elixir Vitriol, ten drops.  
White Sugar, one drachm.  
Pure Water, one ounce.

Mix. A small tea spoonful of this may be given, three times a day, in sweetened water, when there is no fever, and the bowels are otherwise in a good condition. We have seen the spirits of turpentine do much good where the mucous membrane of the bowels was affected; and this is manifested by a coated tongue and slimy stools.

*Recipe:* Spirits Turpentine, half ounce.  
Balsam Copaiva, one drachm.

Mix. From five to ten drops of this mixture may be given, according to the age of the child, three times a day, in cold water. It has been of great service in some cases. Or, as a tonic, and restorer of the healthy action of the mucous tissue of the bowels, the yellow root will be found an invaluable remedy.

*Recipe:* Pulv. Yellow Root, one drachm.  
Hot Water, two ounces.  
White Sugar, two drachms.

Mix. Stir this mixture together, in a tea cup or glass, for five minutes; let it settle, and give a tea spoonful of the fluid every two hours, for ten or twelve hours. This calms irritation of the mucous surface, and gives tone to the parts.

*Diet.* The diet is of great importance in the commencement of the disease, and should be exclusively breast milk. If the child be weaned, a nurse should be procured; and if it will not suck, the milk should be drawn out, and the child fed with it.

But the stomach should never be filled half full at any time, nor should it suck too often, because its thirst would prompt it to take too much. If the child is old enough to take it, gum-Arabic

water, in the proportion of half an ounce of the gum dissolved in half a pint of water, will be beneficial. A tea spoonful or two may be given frequently; but if it will not take the breast, its food must resemble it as nearly as possible, and this can be done by taking of new milk two parts, of warm water one part, or gum-Arabic water one part. Mix them, and sweeten very lightly,—for it should not be sweeter than breast milk,—and give a little of this at a time. Rice-water may be added to the milk, and sweetened. Slippery-elm tea may be given for a drink, or any other mucilaginous tea, or toast-water, as may be preferred. As the child mends, arrow-root, sago, rice, boiled flour, etc., may be prepared as a diet.

As soon as practicable, it should be taken out to ride; and the diet may then be strengthened till recovery is complete.

#### OF WHOOPING COUGH.

This disease generally commences like a bad cold, with more or less fever, and there is, also, a greater or less discharge from the nose. These symptoms sometimes continue throughout the disease; while, in other cases, they cease in a few days.

The whooping cough generally attacks suddenly, without being preceded by fever, and is sometimes early attended by the peculiar inspiration or whooping sound from which it is named. At other times, again, a considerable period elapses before the whooping takes place; and *Dr. Cullen* says: “In some cases, the patient does not whoop at all during the disease.”

When the disease is confirmed, the paroxysms are frequent, short, and convulsive; and when the air appears to be exhausted from the lungs, the inspiration is made by a violent effort, from which arises the whooping sound. When the paroxysm has passed off, the individual seems not to suffer; with this exception, that he feels a little weakened.

There is no difficulty of breathing after the cough ceases, for the time, except where there is some other disease of the viscera of the chest. The little patient sometimes closes his mouth when he coughs, and then the blood is apt to gush from the nose, in greater or less quantities. There is always more or less fever in the first stage of whooping cough, and the bowels are sometimes very much confined, and at other times they are regular.

Whooping cough has two stages,—the *active*, or inflammatory, and the *passive*, or stage of debility.

Some writers affirm that it is an atmospheric disease, while others contend that it is always contagious. We shall not enter into a discussion of this subject, but state that we believe it to be exclusively contagious. And we offer the following reason in support of this opinion: there is no atmospheric or miasmatic disease, that we know of, that may not be taken more than once.

It is true, that the whooping cough, measles, smallpox, &c., may attack the same person twice; but it is equally true, that the lapse of time must be sufficient for the peculiar susceptibility of the system to be restored; and, in nine hundred and ninety-nine cases in a thousand, this susceptibility is never restored. We might here give the opinions of Doctors *Watt, Webster, Gregory, Guibert, Alderson, Willis, Hoffman, Welby, Desmilles, Palmer, Underwood, Hillary, Home, Littson, Dewees*, and many others, all supporting a peculiar theory of this disease, varying in some points, as the facts and minds of the authors vary. But we do not think it necessary, in a work of this description, as our object is, plain *description*, and plain *prescriptions*, for the benefit of the mother and patient.

This disease, if let alone in its progress, will last from sixty to one hundred and twenty days, if the patient should live through its course.

**TREATMENT.**—Whooping cough is evidently inflammatory in its outset, and, therefore, requires more or less depletion, according to circumstances. If the fever be high, the cough light, the face much flushed, and the child fleshy and strangles when it coughs, it should be bled from the arm, and then purged freely with the following medicine:

*Recipe*: Calomel, twelve grains.  
White Sugar, thirty grains.

Mix, and divide into six powders, for a child six months old, and give one every hour, with a few drops of water, till the bowels are freely evacuated; and, if the child pukes, the effect will be better. If the fever should not abate and the lungs be greatly relieved, the bleeding and purging must both be renewed. After the purging has been repeated several times, and the inflammation begins to subside, the phlegm will be secreted more copiously; and then, if the child should not puke spontaneously when it coughs, medicine should be given to produce that effect. And perhaps the best is,

*Recipe:* Oxymel Squills, half ounce.  
Cox's Hive Sirup, two drachms.  
Wine Ipecac., two drachms.

Mix. Give a child six months old ten drops, and repeat every ten minutes, till it pukes, when the same number of drops may be given, once in three or four hours, to keep the phlegm loose, that it may be thrown off easily.

It should be recollected that purging with small doses of calomel should never be neglected, but repeated every two or three days, till the fever is, in a great measure, subdued. When this is the case, the phlegm will be secreted freely; and then, the sirup must be given, to throw it off, and occasionally, at night, to puke the child. There are a great many patent sirups recommended and used for whooping cough, but none of these, within our observation, have answered the purpose so well as Harris' Compound Vegetable Cough Sirup, which we can recommend with safety. Directions for using it accompany the bottle.

If the child become feverish again, and the tongue is coated, give the following:

*Recipe:* Calomel twelve grains.  
Ipecac., six grains.

Mix in six powders, and give one every hour, till it pukes and purges the child. This will all be accomplished in about ten days from the first appearance of the cough; the further progress of the disease may now be arrested by using,

*Recipe:* Super Carbonate of Soda, one drachm.  
Comp. Spts. of Lavender, one drachm.  
Water, two ounces.

Mix. Give a tea spoonful three times a day, to a child six months old, and increase or diminish the dose, according to age and strength; at the same time, use the following liniment:

*Recipe:* Sp's. Camphor, two drachms.  
Spts. Turpentine, two drachms.  
Ol. Olive, two drachms.  
Carbodate Ammonia, one drachm.

Mix properly, and rub it with the fingers, between the shoulders and on the breast, twice a day, always shaking the vial before using it. The skin should be washed clean with warm water, vinegar, and soap, every other time before the liniment is rubbed in.

The bowels should now be kept open with castor-oil, every day or two. There are a hundred nostrums and remedies prescribed for whooping cough, but we have found the above practice to do more good than any other we have ever tried.

After the disease has been entirely removed from the system, the cough will sometimes continue, from habit, and keep up its spasmodic form. As a remedy for this, garlic has been highly extolled; and, for a child six months old, the sixth part of a clove may be given, twice a day, and increased in proportion to age. A grown person may take a whole clove. If this does not stop the spasms, in a few days, give the following :

*Recipe* : Quinine, three grains.  
Sulphuric Acid, one drop.  
Water, half ounce.

Mix. Give ten drops, in sweetened water, three times a day, and so in proportion to age.

As soon as its strength will permit, the child should ride out, especially if it live in a city.

If the child is at the breast, the milk will be food sufficient for it; and after weaning, cow's milk, diluted with water, will form its best diet, together with mush and molasses, or the crumbs of bread. Larger children should live on a vegetable diet, but no meat, or soup, should be allowed while the fever lasts. The drink may be water. Its clothing should be warm and comfortable, according to the season of the year, and damp or cold air must be avoided. The room should be ventilated, but the child should never be exposed to the current of air passing through it.

#### OF INFLAMMATION OF THE TONSILS.

This disease is generally produced by exposure to cold or dampness, or to a draught of cool air, after being over-heated, &c. Children of the sanguine and lymphatic temperaments are most liable to it. It commences with a dryness in the throat, after which pain and inflammation ensue, the tonsils swell, the child has more or less fever, the phlegm is soon secreted in abundance, and the disposition to swallow which it produces aggravates the pain of the throat.

This inflammation is of two kinds—simple inflammation of the fauces and tonsils, and erysipelatous inflammation of these organs. The first is of a bright red, and the second of a purple color. This disease is not considered dangerous, unless the inflammation should reach the larynx, when, if not soon relieved, it may suffocate the patient.

TREATMENT.—In the first stage of this disease, the remedies should be such as are calculated to reduce fever and inflammation. If the child makes known its situation in time, two or



three potions of Harris' Cough Sirup, given two hours apart, will cure it in one night. We have witnessed the rapid effect of this remedy, repeatedly. But should the mother not have this at hand, she may make a weak gargle of pepper tea, and give it to the child at bedtime. Should this fail, she then must resort to,

*Recipe:* Calomel, six grains.  
Ipecac., two grains.

Mix, and divide into six powders; give one every hour, till they purge freely. Use the following liniment:

*Recipe:* Spts. Hartshorn, two ounces.  
Spts. Turpentine, two drachms.  
Olive Oil, two drachms.

Mix. Rub the throat and neck with this; after which, a piece of flannel should be bound around the neck. If the fever should run high, the child should be bled.

The late discovery of the following remedy has proved of great service in chronic inflammation of the tonsils:

*Recipe:* Extract of Black Walnut Hulls, one drachm.

Dissolve in a gill of water, and gargle the throat with it five or six times a day. Or the extract may be dissolved in water, of the strength of one drachm to the ounce of water, and applied twice a day, with a camel's-hair pencil. This will reduce the enlarged tonsils, after they have been enlarged for years.

In the erysipelatous form of this disease, all the above remedies should be pushed with energy; in addition to which, a blister should be applied around the throat. If suppuration takes place, the tonsils should be lanced, when a gargle of sage tea, honey and alum, will soon complete the cure.

The diet must be light in both forms of the disease, and exposure carefully avoided, or the child will be subject to frequent attacks.

#### OF MUMPS.

When this disease attacks the system, the first symptom is felt in the hinge of the lower jaw, immediately in front of the ear, where a stiffness is first felt; and if anything acid is taken into the mouth, a quick, pungent pain is experienced under the ear. The disease is seated in the *parotid glands*.

After the above sensations are felt, the glands begin to swell, and fever arises. The patient sometimes feels a chilly sensation passing over the system, and suffers more or less pain in the

head. In some cases, only one side is affected, and when the disease has nearly run its course there, the other side begins to swell, and its glands go through the same course.

The inflammation sometimes extends itself to the *submaxillary glands*, and then the suffering is increased. The jaws swell and become painful, and there is more or less difficulty in swallowing, owing to the swelling and stiffness in the root of the tongue.

If the patient be exposed to cold, or gets the feet wet, a metastasis, or falling of the mumps, may take place. If the patient be a male, the testicles may swell very much, and become extremely painful; and, if a female, the breasts will be affected in a similar manner. Sometimes these metastases present serious symptoms, such as great fever, restlessness, anxiety of mind, and, if the brain be implicated, there will be more or less delirium.

When this disease progresses in its mild form, and runs its natural course, the swelling in the jaws and face begins to subside in four or five days, and in as many more, is entirely gone. But if it should fall, and much fever supervene, the patient may suffer for a much longer time.

**TREATMENT.** — It is thought by some that mumps require but little medical attention, especially in warm weather, but we have found it safest never to neglect any disease. If the fever should run high, the patient should be bled; after which, give,

*Recipe:* Calomel, ten grains.  
Scammony, six grains.

Mix in two papers. For a child five or six years old, give one, and repeat in three hours, and assist their operation with gruel or toast-water.

After the operation is over, rub the swelling with,

*Recipe:* Spirits Hartshorn, half ounce.  
Spirits Camphor, two drachms.  
Olive Oil, two drachms.

Mix. Use this liniment three times a day, and keep the bowels open with Epsom salts, dissolved in cold water, and given, in small portions, every two hours. But where the metastasis takes place, if in a male, an emetic should be immediately given

*Recipe:* Tartar, one grain.  
Ipecac., ten grains.

Mix. Dissolve in nine spoonfuls of warm water, and give two at first, and one every fifteen minutes, till they operate

freely. A glass of warm water should be given every time he pukes, till he has four or five motions up, when gruel should be taken, to turn its effects on the bowels. If, however, it does not act freely on the bowels, give,

*Recipe* : Epsom Salts, half ounce,

dissolved in half a gill of warm water; and, at the same time, rub the jaws and neck with the liniment above directed.

If the testicles are much swelled, let the patient lie down, and keep the scrotum bathed in warm vinegar and water. If a female, and her breasts swell, she need not take the emetic,—for it will rather do her harm than good,—but, in its stead, the following :

*Recipe* : Calomel, ten grains.  
Rhubarb, ten grains.

Mix in two powders, and give them two or three hours apart. Rub her jaws with the liniment, as above directed; bathe her breasts with warm vinegar and water; and, after the operation of the calomel and rhubarb, keep her bowels open with Epsom or Rochelle salts.

In all cases, the neck and jaws should be covered with flannel, and the patient kept in the house. The diet should be of the lightest kind.

Let it be remembered that *this disease is contagious*.

#### OF CROUP.

This disease takes its name from the sound produced by the breathing of the child.

Half a volume might be written upon it, if we were to enter into a discussion of the various opinions expressed concerning it, and the remedies prescribed for its cure. But our object is to impart plain and practical truth, not to discuss theories.

*Croup* evidently divides itself, by the course it pursues, into three different stages, each of which requires a different treatment. We shall, therefore, take them up in order.

*First stage.* Children are generally the subjects of croup; of whom, perhaps, a majority have it between the age of nine months and three years, though no age is entirely exempt from it. It is said, by some authors, that grown persons occasionally suffer from it, but we have never seen a case of the kind.

This disease, for the most part, comes on suddenly, and fat children are more subject to it than those of a different habit of

body. Exposure to wet, cold or dampness, either of the whole body, or of the feet, hands and arms, will produce it, and it prevails mostly in the fall, winter, and spring. Some families are more subject to croup than others.

The first symptom of its approach, generally, is a peculiar dry hoarseness, observable only when the child coughs. This symptom may exist for a longer or a shorter time; and, in some instances, it has been present for several days, while, in other cases, the progress of the disease is very rapid. This hoarseness may, or may not, be accompanied by a secretion of mucus from the nose; and, in this stage, the child has little or no fever, and breathes easily. In general, the appetite is yet good, and the bowels regular.

All this may be the case, and yet, such is the rapid progress of this disease, the child may die of croup in six hours from the first appearance of these symptoms. But, in these first symptoms, the hands and feet will be found to be unusually cold, the face rather pale, and the skin will appear as in the first stage of an intermittent fever. Where the attack is quick, we do not observe these symptoms so distinctly. The nose is dry, and the breathing hoarse and sonorous; the cough dry and harsh; and, if anything is thrown up, it is thin and whitish, and in very small quantities. There is a little coating on the back part of the tongue.

These are the symptoms of the first stage of croup.

TREATMENT FOR THIS STAGE.—The treatment in the first stage consists in the immediate application of spirits of turpentine, or vinegar and mustard, externally to the throat. If this does not relieve the hoarseness, as soon as the stimulating effect is over, repeat it immediately; but a blister should not be raised. Give the following sirup immediately:

*Recipe:* Oxy mel Squills, half ounce.  
Cox's Hive Sirup, two drachms.  
Wine of Ipecac., two drachms.

Mix, and of this preparation, give a child six months old fifteen drops, and repeat every ten minutes, till it pukes freely. Increase the dose, according to the age of the child, till the above effect is produced, when ten drops may be given, every two or three hours, till the hoarseness is all removed. If the bowels are not acted on by the sirup in three hours, give a dose of castor-oil.

The child should be kept in the house, and flannel worn

around the neck till the inflammation leaves the skin. The diet should be very light, for a day or two.

If mothers would observe this part of the chapter on croup, and attend strictly to these directions, a case of confirmed croup would rarely occur in their families. But should they neglect the first stage, the second will soon come on.

*Second stage.* In the second stage of croup, the hoarseness is evidently increased, and has a ringing sound; the cough is more frequent, lasts longer, and the child is more exhausted by it; the breathing becomes more difficult, and the face flushed during the cough.

Perhaps one cheek will be redder than the other; the pulse becomes quick, hard, and sharp; the hands and feet rather cool; the child becomes drowsy, from which feeling it is aroused by a hard cough, with an increased difficulty of breathing. It tries to raise itself up, as if it wanted a freer circulation of air. The brain is, also, affected.

TREATMENT IN THE SECOND STAGE. — If the first stage has been neglected, and the second stage is ushered in, we find two conditions of the patient. In the first, all the symptoms of breathing, croup, and hoarseness, are increased, but the extremities are cool and the face pale, the pulse quick, but not strong. Stimulants must be applied to the throat, as in the first stage of the disease; and if the bowels are bound, an injection must be given. After this, give the following medicine :

*Recipe :* Calomel, fifteen grains.  
Ipecac., six grains.

Mix, and divide into three powders, and give one every fifteen minutes, till they puke the child freely. This is sufficient for a child six months old, and the dose must be enlarged for an older child. After puking freely, give the medicine once in an hour or two, till the child is again puked; and keep up this action, according to the strength of the patient, till a moisture is produced on the skin, and the extremities become warm. When this is effected, the patient is brought to the second condition of the second stage, and must then be bled from the arm, or cupped between the shoulders. In order to do good, the bleeding must be continued till the patient is near fainting; the pulse must flutter under the finger before the bleeding be stopped.

As soon as the child resuscitates, the purgative medicine must be repeated, but in smaller doses.



*Recipe* : Calomel, six grains.  
Ipecac., three grains.

Mix. Divide into twelve powders, and give one every hour, to keep up a purgative effect on the bowels. The sirup prescribed in the first stage should now be given, in doses of five or six drops every hour, to keep the phlegm loose.

If the fever continue, the bleeding must be repeated again, and even again, till the inflammation is removed from the throat. But, to justify the repetition of the use of the lancet, the pulse must be hard, the skin hot, the face flushed, and the breathing difficult.

The warm bath is often resorted to in croup; but it requires more judgment to use it, in this disease, than, perhaps, in any other. Two baths are never exactly of the same temperature; and therefore they are, *in fact*, two different remedies; and, until it can be determined how warm the bath ought to be, it had better not be used. But if it is used, the feet and legs only should be put into it, and not the whole body.

Laudanum should never be given in croup.

If the disease does not yield pretty soon, under the above treatment, after the formation of the first stage, the third stage will soon be ushered in.

*Third stage of croup.*—This consists in the formation of a deciduous membrane, or lining of the windpipe, with tenacious mucus or purulent lymph, which does not coagulate, but will soon obstruct the air-vessels. This stage is one of great danger, since we can rarely get rid of the mucus or membrane in the throat; and even if we do, the parts soon form another. The brain now presents strong symptoms of congestion; the eyes are suffused, and the child gasps for breath; the hands and feet become cold, or cool. We have now but little hope of saving the patient's life.

TREATMENT IN THE THIRD STAGE.—In this stage of the disease, if we cannot dislodge the membrane or mucus from the windpipe, we cannot cure the child. But, for this purpose, many things have been tried.

In Europe, they use tartar emetic altogether, and puke the child freely and frequently. We must say, however, that we believe this practice will kill more than it will cure. Tartar is too strong and too prostrating for an infant.

*Dr. Chapman* gives a strong decoction of snakeroot.

*Recipe*: Seneca Snakeroot, half ounce.  
Boiling Water, half pint.

Simmer the snakeroot in the water, till it is nearly half reduced, and of this decoction give a tea spoonful every fifteen minutes, till the child pukes freely. This quantity will answer for a child from one to three years old.

At this time, the following liniment should be used :

*Recipe*: Spts. Turpentine, two drachms.  
Spts. Camphor, two drachms.  
Olive Oil, two drachms.  
Carbonate Ammonia, one drachm.

Mix thoroughly, and rub the throat, and breast, and spine, from the hair to the waist, with this liniment. If the bowels are confined, give an injection, and follow it immediately with,

*Recipe*: Calomel, ten grains.  
White Sugar, twenty grains.

Mix, and divide into five powders. Give one every hour, till they operate freely. The powders may be repeated, every day, till all fever leaves the child; when the bowels may be kept open with,

*Recipe*: Sirup of Rhubarb, one ounce,

of which give a tea spoonful two or three times a day.

If the child recovers, it should be taken out to ride as soon as its strength will admit.

The diet must be gruel, rice-water, arrow-root, barley-water, slippery-elm tea, milk and water, or the mother's milk.

#### OF WORMS.

There is a great variety of opinions as to the cause which produces worms in the alimentary canal of children and grown persons. We shall not, however, enter into an elaborate discussion on causes remote and proximate on this subject; and would only say, that weakly children, that have been raised by feeding instead of the breast, from a very early age, are more liable to be afflicted with worms than those which are healthy, robust, and have lived entirely on the breast. Children that are fed indiscriminately on a little of everything, as mothers generally say, are most apt to be afflicted with worms.

Indulgence in the use of unripe fruits is a fruitful cause of the generation of worms, and grown persons who are weakly are liable to be afflicted with them.

The symptoms of worms are an itching of the nose; sickness

of the stomach, especially in the morning; raising a white, light, frothy phlegm from the stomach; sometimes a voracious appetite, and, at other times, loss of appetite; an enlarged abdomen; the bowels either costive or too much relaxed, and the discharges fetid. The child is fretful, with flushes of fever at night, but the tongue is not coated. It is apt to start in its sleep, and spring up and appear to be scared, and cry out. It may puke up a worm, when it strains to vomit; and, at times, it has a dry, hacking cough; its face looks pale, and the upper lip is frequently swollen in the morning. It becomes sick, occasionally, and looks pale around the mouth and nose; and sometimes it complains of itching about the bottom, and is disposed to scratch itself there. These are the most prominent symptoms of worms.

There is a great variety of worms, some of which produce an additional set of symptoms to those already mentioned. But these embrace the most of the symptoms produced by such worms as those with which children are afflicted.

The different varieties and names of worms are these:

#### FIRST SPECIES.

- |                      |                                  |
|----------------------|----------------------------------|
| 1. Long Round Worm,  | or <i>Ascaris Lumbricoides</i> . |
| 2. Long Thread Worm, | or <i>Tricephalex</i> .          |
| 3. Long Tape Worm,   | or <i>Tenea Solium</i> .         |
| 4. Broad Tape Worm,  | or <i>Tenea Vulgaris</i> .       |
| 5. Fluke Worm,       | or <i>Fasciola</i> .             |

#### SECOND SPECIES.

- |                         |                                  |
|-------------------------|----------------------------------|
| 1. Thread, or Maw Worm, | or <i>Ascaris Vermicularis</i> . |
| 2. Beetle Grub Worm,    | or <i>Scarrabecus</i> .          |
| 3. Bots,                | or <i>Astrus</i> .               |

#### THIRD SPECIES.

- |                |                                 |
|----------------|---------------------------------|
| Erratic Worms, | or <i>Helminthea Erratica</i> . |
|----------------|---------------------------------|

The *first* of the first species, or long, round worm, has a body partly transparent, and a little yellowish, with a faint line down the side, and is from six to fifteen inches long. It inhabits principally the ilium, but sometimes ascends into the stomach, and creeps out of the mouth or nostrils. It occasionally travels to the rectum, and escapes through the anus.

The *second* of the first species is the long thread worm; it is about two inches long, and in color resembles the former. Its head is thick, and its tail slender and sharp. It inhabits the scœcum, generally.

The *third* of the first species is the long tape worm, in which the articulations are long and narrow, with marginal paws, by which it attaches itself to the intestines; one of these paws is situated on each joint generally, alternate with a terminal mouth, two rows of radicated hooks or holders, and a little below, four suckers, two on each side. This worm is from thirty to one hundred feet in length, inhabits the upper part of the intestines, and lives upon the chyle and nutritious juices already animalized. Only one is sometimes found; but, more frequently, there are several in the same person. They adhere so closely to the intestines that they are with difficulty dislodged, and are said to have the power of reproducing parts that have been broken off. This worm is oviparous, and discharges its eggs from each joint; these are about one inch long, thin and white, and flat on both sides, like tape. When discharged alive, they roll themselves into a knot that cannot be untied. We have seen thirty feet of this worm come from a man, and sixty feet taken out of the intestines of a sheep.

The *fourth* of the first species is the broad tape worm. The articulations of this worm are broad and short, with a split in the end and centre of each joint. Its body is broader in the middle, and tapering towards each end, and its head resembles that of the third of this species. It inhabits the upper intestines, feeds on the chyle, is from three to fifteen feet long, and three or four are usually found together.

The *fifth* of the first species is the fluke worm. Its body is rather flat, and it has a double mouth in the head,—one above and one below. It is oviparous.

*Of the second species.*—The *first* of the second species is the thread or maw worm. This worm is wrinkled on the sides; its tail is finely tapering, and terminates in a sharp point. It is about half an inch long; its color, white; its head is divided into three points, in the middle of which it receives its nourishment. Its location is in the rectum, but sometimes it wanders into the intestines, and even as high as the stomach. It produces great itching sensations about the anus in the evening. It is viviparous.

The *second* of this species is the beetle grub. This worm is a gray larva, with yellowish legs, and a head resembling iron in its appearance; it is six feet in length, is hairy at the end of its abdomen, and its head is horny.

The *third* of the second species is the bot. This worm is the

product of the gadfly; it is of a round figure, pale-green color, tail obtusely truncated, head tapering, mouth horny with two lips, and two recurved black claws on each side of the mouth.

*Third species.*—These are worms of various kinds, not belonging to either of the above species, but produced by accidental introduction of larvæ into the stomach, which there brings forth an anomalous worm.

It is impossible, in the present state of medical science, to give the peculiar symptoms which attend each kind of worms we have described, and the precise appropriate remedy for their destruction or expulsion. We know the general symptoms that are attendant on worms, and that is about the extent of our knowledge, till the worm is discovered.

The symptoms, as stated before, are these: headache, vertigo, torpor, disturbed dreams, sleep broken off by fright and screamings, convulsions, feverishness, thirst, pallid complexion, bad taste in the month, offensive breath, cough, difficult breathing, itching of the nose, swelling of the lips and end of the nose pain in the stomach, nausea, squeamishness, voracity, leanness, tenesmus, itching about the anus towards night, ejections of films and mucus from the bowels, and a diarrhœa, with fetid discharges, &c.

The broad tape worm produces the most mischief on the body, while the long red, or yellow worm, is not suspected till it appears in the fæces.

Notwithstanding the above symptoms accompany worms in the digestive organs, yet any other cause, as acid, bile, or other offensive substances, may produce all, or nearly all, these symptoms.

Worms injure the body they inhabit in one of these ways: *First*, by irritation; *second*, by destroying the nourishment intended for the support of the child; and, *thirdly*, by their bulk, from accumulation.

A small volume might be written on this subject; but we deem what we have already said sufficient for all practical purposes, especially in a work of this description. We shall now proceed to give the treatment, but cannot designate the precise remedy for each sort of worm, as the symptoms do not always declare their species.

**TREATMENT.**—There are so many remedies prescribed for worms, and we have used so great a variety, that we cannot say any one has the preference above every other, in all cases. But



it is certain that some remedies are better for the removal of some kinds of worms than for others.

For the removal of the long yellow, or red worm, which is the most common in this country, the following preparation has been found very effectual :

*Recipe :* Pink Root, two drachms.

Made fine. Boil it in a pint of weak coffee, down to half a pint; sweeten, and add cream to half this tea, and let the child take it for breakfast, with bread and butter. The remainder may be warmed, and given for supper, in the same way. This should be repeated two or three days, when a dose of senna tea, or castor-oil, should be given, to work off the dead worms, if any remain. Or the child may take :

*Recipe :* Pink Root, two drachms.  
Senna Leaves, two drachms.  
Worm-Seed, one drachm.

Make all fine, and mix ; divide into three portions, and make a strong tea of each portion, say a large tea cupful ; sweeten it well, and add cream or milk.

The child may take one of these portions, with bread and butter, every morning, for three mornings. We have known each of these remedies to bring away large numbers of the large red worm, even after other good remedies had failed.

The oil of turpentine is an excellent remedy in many cases. A child one year old may take ten drops on sugar, morning and evening, for three or four days ; and this should be followed by a dose of castor-oil.

Copperas has also removed many large worms. It should be given as follows :

*Recipe :* Copperas, twelve grains.

Pulverize, and divide into six powders ; give one powder, morning and night, in sugar, or dissolved in sweet milk. When the child is feverish, and the bowels much loaded, small doses of calomel, in conjunction with pink tea, will be found good. To a child one year old, give :

*Recipe :* Calomel, six grains.  
Rhubarb, three grains.

Mix. Divide into three papers, and give one, night, morning, and noon, in sirup.

*Recipe :* Pink Root, two drachms.

Make a tea of the pink root, — the top is just as good ; sweeten it well, and let the child drink it freely, in the place of water, till the powders are worked off.

Where there is no fever, the oil of worm-seed is a good remedy, but it should not be given where there is fever. Three drops will be sufficient for an infant one year old, and the dose may be increased one drop for each year. It should be given on sugar, every morning, for three or four mornings, when a gentle purgative of senna, castor-oil, or rhubarb, should be given.

When the child is costive, indigo-water has been found efficacious in the removal of worms. It is given in two grain doses, dissolved in a spoonful of sweetened water, to be taken every morning, for three or four mornings, to act on the bowels.

When the worms ascend into the stomach, and cause vomiting, an emetic may be given, which will throw them out immediately.

*Recipe* : Ipecac., ten grains.

Dissolve in two spoonfuls of warm water. Give it at three draughts, ten minutes apart ; or, if the ipecac. is not at hand, give a tea spoonful of table salt, dissolved in two table spoonfuls of warm water. This will cause the child to throw up the worms, or pass them off through the bowels. Ten grains of table salt, given every morning, in water, is a popular remedy, and not a bad one.

The savin powders, cowage, the bark of the cucumber-tree, and China-tree berries, are all frequently given for worms ; but they are rather dangerous in the hands of any but an experienced physician, and should be used by no one else.

The male fern is a popular remedy for tape worm ; so is castor-oil and spirits of turpentine mixed, and taken in the proportion of an ounce of each for a dose, twice a week, for grown persons. All these remedies have had their advocates and opposers, at different times ; not because they are not all effectual, in some cases, but because one remedy will not destroy all kinds of worms, nor even the same worm at all times. But, as we do not know the exact kind of worm from the symptoms, any of them may be given, and if one fail, another can be tried, till the worms are expelled.

The ascarides are troublesome little white worms, that irritate the rectum, and produce much itching in these parts in the evening. They can only be discharged by injections. Many remedies, such as tincture of aloes, *fœtida*, and all the bitter

infusions, have been recommended, but the best we have used is salt and water. This should be thrown up the rectum, in the evening, about sunset, as this is the only time these worms come low down in the rectum. If, after being repeated three or four evenings, this should not carry them off, add two tea spoonfuls of spirits turpentine to each injection. Use the child's syringe of the largest size, and throw the injection forcibly in. A dose of castor-oil may be given, two hours before the injection.

## OF RICKETS.

This disease is not of so frequent occurrence in this country as in some of the eastern countries.

Children are rarely attacked with it before the ninth month, or after they are two years old. It chiefly affects the limbs and body; the backbone becomes crooked, the ribs are depressed, the joints become enlarged and spongy, the belly is tumid; the mind, however, is clear, and often prematurely active. "These symptoms are preceded by a paleness and swelling of the countenance, and a yellow, sulphury hue in that part of the cheek which should naturally be red. In some rare cases, it attacks later in life, that is, before the bones have acquired their full size and firmness, and it is said to have occurred even after this period."

—*Thomasin*. "But in these late appearances, we are generally able to trace the attack to some local injury which acts as an exciting cause."

Rickets, for the most part, come on slowly; the body becomes gradually emaciated, the flesh soft, the cheeks wan, or sallow, with a slight degree of tumefaction; as the flesh diminishes, the head increases in size; the sutures gape, and the forehead becomes prominent. The backbone becomes weakened and distorted, and incapable of supporting the weight of the body. The ribs and breastbone also partake of the distortion; the former become straighter, and the latter projects into a ridge, like the breast of a fowl. The bones suffer from a deficiency of earthy or bony matter; the process of breathing is slow and defective; all the cellular membranes seem to be deficient in oily matter, and the muscles have no strength, and but little irritability. The mental organs seem alone to be free from this extensive change; and while the body is failing, the mind is rapidly developing. Many of our eminent poets, statesmen and generals, have, from being the subjects of the rickets when children, been hump-

backed and distorted in their persons, while their minds, like brilliant stars, have shone with resplendent lustre from the zenith of the mental heavens.

TREATMENT. — In the treatment of rickets, the mind should be directed to the two following objects: *first*, to strengthening the system generally, and, *secondly*, to giving a supply of the phosphate of lime to the organs that constitute the chief seat of disease.

For the accomplishment of the first, a pure, dry and temperate atmosphere, a wholesome and somewhat generous diet, regular exercise, of such kind as can be indulged in with the least inconvenience, clean linens and cold bathing, are of essential service, and have often performed a cure independently of other remedies. It is probably owing to a more particular attention to these things, that rickets are less frequent than they were half a century ago.

A tonic plan of treatment is, however, necessary to accompany the above remedies, and the metallic tonics are to be preferred.

*Recipe*: Carbonate of Iron, twenty grains.  
Sub. Carbonate of Soda, ten grains.

Mix, and, for a child one year old, divide into twenty papers, and give one, morning, noon and night, in a little sugar. If the appetite fail, and the stomach becomes sour, an emetic should be given.

*Recipe*: Ipecac., ten grains.

Dissolve in two ounces of water, and give a small spoonful every fifteen minutes, till the child pukes freely. The bowels must be kept open with *rhubarb*, given in small doses, so that it may not operate too freely.

There is a great deficiency of action in the skin, especially in the lower extremities, and rubefacients will be found of service in this case. In the Western Isles the heating oil of the skate-fish is used for this purpose. It is rubbed in, on the wrists and ankles, every evening. This raises a fever of several hours' duration, when the unction on these parts loses its effect. It is then applied, in like manner, to the knees and elbows, and afterwards to the spine or backbone, so that a certain degree of fever may be maintained; and when friction on all these parts is found to fail,—as fail it will by degrees,—recourse is finally had to a flannel shirt, dipped in the oil; and this produces a higher degree of fever than has yet existed. It is continued to be worn,

after fresh illinations, till the disease is removed; which is said to be pretty certain, and usually in a short time. When this oil cannot be had, the following will be found to be a good substitute:

*Recipe:* Tincture Cantharides,  
Spts. Turpentine,  
Spts. Camphor,  
Olive Oil, — of each half an ounce.  
Carbonate of Ammonia, two drachms.

Mix them well, and shake the vial each time before using it. It should be applied as above directed for the use of the skate-fish oil.

Much has been said by instrument makers in relation to this disease, and many forms of apparatus have been invented for the support, strengthening, and cure of rickety limbs. But they are all worse than useless; and decidedly the best remedy for strengthening the joints and bones, is proper exercise, the tonic above prescribed, and a nourishing diet.

While the child is in the house, let it lie down on a smooth floor or carpet, and roll and tumble over it for hours each day. Rub and straighten the limbs with your hands, but do not attempt to make the child stand on its feet too often, as its weight will produce a further curvature of the long bones and the spine. This exercise should be gradually given as the bones strengthen.

#### SCARLET FEVER.

Like most other fevers, this disease commences with chilliness, fulness of the head, and lassitude, to which succeeds prostration of strength, according to the violence of the attack. There is sometimes nausea and vomiting, and the surface soon becomes florid and hot. The throat is generally inflamed, and the same appearance extends to the tongue, which is sometimes of a very deep scarlet, tinged with blue.

There is often, at this time, more or less catarrhal affection, and severe pain in the head, particularly about the frontal sinuses. The intellectual faculties are sometimes disturbed; and the degree of these symptoms indicates with sufficient exactness the strength and character of the forming disease. If the symptoms are slight, the disease will be mild; but when all these symptoms are increased, it is called *scarlatina anginosa*, or malignant scarlet fever.

In the worst form of malignant scarlet fever, the symptoms are



alarmingly violent. The attack is generally sudden, and the patient becomes pale and faint, the heart palpitates, and the stomach is subjected to great uneasiness, though there may be no vomiting, as it may be prostrated below the power of reaction. The face is pale or livid; the eye exhibits a glaring appearance; the lips sometimes present an appearance similar to that produced by intoxication; and sometimes a remarkable swelling of the fingers takes place, which, when connected with the peculiar inflammation, is sufficient to characterize the disease. The fever continues to rise higher and higher, till the second or third day, and the skin becomes morbidly sensitive to the touch, when the eruption begins to make its appearance. The color of the skin is said to be "that of a boiled lobster." At the same time, a degree of redness and swelling appears in the fauces, and the surface becomes excessively hot,—more so, perhaps, than in any other form of fever. The pulse now rises to one hundred and fifteen or twenty strokes in a minute, the reaction, at this stage, being complete.

The pulse and the eruption will give the form and character of the disease. If the form be simple scarlet fever, the pulse will be frequent, but moderate; if it be an aggravated form of the disease, the pulse will be more frequent, irritated, and tense; and if it be the malignant form, it will be still more so, yet not so full, frequent, resisting and firm. The temperature of the body, the eruption on the skin, the scruff on the tongue, and swelling and color of the throat, will all be graduated in the same proportions with the action of the heart, and arteries, or pulse.

In some cases, the eruption assumes the form of red points, but most generally that of red patches, which spread and unite, till they cover the whole body. The eruption appears first on the face and neck, then on the legs, and the redness is greatest about the loins, and bending of the joints, and on the hands and ends of the fingers. There is not, however, a perfect regularity in the eruption of scarlet fever, either in appearance or duration.

In ordinary cases, the eruption remains out about four days, when the grain of the skin begins to peel off, and in a few days more it disappears. As the disease progresses, the tonsils become specked with ash-colored spots, and ulceration follows. In favorable cases, these sloughs come off in eight or ten days; after which, the ulcers look fresh and red, and generally heal kindly the fever gradually abates, and the patient recovers rapidly.

But in more malignant cases, the termination is different. The sloughs in the throat grow fouler, and the discharge from them and the nostrils becomes very acrid; the inflammation in the month changes to a darker color, and the surface is generally incrustated with a dark or black fur; the breath becomes offensive, the fauces are lined with a tough mucus, an acrid serum is discharged from the eyes, and hemorrhage is also apt to take place from these parts. We have seen the blood ooze from every pore of the inner surface of the mouth, like sweat from the skin; and this condition appears to obtain throughout the stomach and bowels, for the blood is freely discharged by stool. This brings on an aggravated diarrhœa, when delirium or stupor follows, the glands under the ears become swollen and tender to the touch; those of the neck swell, also, and sometimes terminate in supuration, and ill-conditioned ulcers.

It is thought by many that scarlet fever is contagious. The weight of evidence, however, is against this opinion, in this country. When the throat is putrid, if you breathe the hot breath immediately from it, you will very probably take the disease. We once took it in this way, but are fully persuaded it cannot be taken at the distance of a few feet from the patient.

The prognosis in this disease is favorable, or unfavorable, in proportion to the form of its attack, the violence of its progress, and the age and strength of the subject of it.

Great prostration of strength, delirium, extreme restlessness, the discharge of an acrid sanies from the nose, a purple or livid appearance of the fauces, without tumefaction, interspersed with the white spots or dark sloughs, attended by a diarrhœa of acrid matter, and, above all, the change of the eruption to a mahogany color, are extremely dangerous symptoms. But in some cases where every hope is entertained of a recovery, death may take place suddenly.

If the patient does not die by the ninth day, he will generally get well under proper management, though it may be three weeks, in some cases, before he recovers. When this disease terminates favorably, all the symptoms generally yield, beginning about the fourth day after the eruption appears.

The patient is more liable to relapse in this than perhaps in any other form of fever. Take scarlet fever all together, in all its forms, and it is more alarming than any disease to which we are liable. It has slain its thousands where the monster of all diseases, cholera, has slain its hundreds. Parents would do well

to watch its first appearance, and keep their children from its influence as much as possible. Grown persons are not so liable to take it, for, as a general rule, it is one of the diseases of children.

**TREATMENT.**—In the mild form of this disease, much medicine is not required.

Emetics are prescribed, by most authors, in its incipient stage; but we have not found them to succeed well. The stomach is naturally inclined to be irritable; it ought, therefore, to be our endeavor to keep down the irritability.

If the fever is very high, the pulse full and strong, and the pain in the head great, the patient should be bled from the arm, and then take the following medicine. This is a dose for a child one year old, and must be increased or diminished, according to age :

*Recipe :* Calomel, twelve grains.  
Pulv. Mace, two grains.

Mix, and divide into six powders; give one every two hours, in a few drops of sirup, till they operate well.

The drink should be balm tea, if it can be had; if not, sage, hyssop, saffron blossoms, or dittany, as this will bring out the eruption, and keep it out full; and if this can be accomplished, the danger of the disease will be very much lessened. This fact should be kept in view in all eruptive diseases.

The above purgative should be repeated every day, till the eruption begins to fall off, when the following one may be substituted. Should the powders produce dark, heavy discharges, it is so much the better; follow them with the

*Recipe :* Aromatic Sirup of Rhubarb, one ounce.

Of which a tea spoonful may be given every two hours, or less frequently, so as to keep the bowels open. Castor-oil, or rhubarb, in powders, will do; or,

*Recipe :* Calcined Magnesia, one drachm.  
Cream Tartar, twenty grains.

Mix, and divide into six powders, and give one every three or four hours, in sweetened water, so as to keep the bowels open.

The throat should be washed or gargled with the following mouth-water, frequently :

*Recipe :* Red Pepper, one drachm.  
Table Salt, one ounce.  
Vinegar, one pint

Boil all together for ten minutes; strain, and, when cool, wash or gargle the throat frequently. If Brites' Rheumatic Liniment can be obtained, apply it freely and frequently to the throat, externally; or you may use:

*Recipe:* Spirits Camphor, two drachms.  
Spirits Turpentine, two drachms.  
Olive Oil, two drachms.  
Carbonate Ammonia, one drachm.

Mix perfectly, and apply it freely; and wrap a piece of flannel or silk around the neck.

The diet should be of the lightest kind, thin, and easy of digestion.

*In the second form of this disease*, all the above remedies should be used, but promptly, losing no time; the doses should be double, and administered more frequently. In this form of the fever, the patient will find the juice of an orange very grateful to the taste; it also helps to keep the medicine down, and to clean the tongue.

*The malignant form of this disease* requires a different mode of treatment in the beginning. The stomach is torpid, and the pulse weak, quick, and rather compressible; the patient does not vomit, the energies of the stomach being very much prostrated. The phlegm accumulates in the throat, and the swelling is great; and, consequently, we should commence the treatment of this form of the disease by an emetic.

*Recipe:* Ipecac., ten grains.  
Tartar, two grains.

Mix. Dissolve in nine spoonfuls of warm water, and give one spoonful every ten minutes, till the patient pukes freely. Then follow it with,

*Recipe:* Calomel, twenty grains.  
Scammony, ten grains.  
Pulv. Mace, three grains.

Mix. Divide into four powders, and give one, in sirup, every two hours, till they operate freely. The bowels are harder to act upon in this than in any other form of scarlet fever.

In addition to the above remedies, antiseptics are necessary to counteract the putridity of the throat. These may be,

*Recipe:* Muriatic Acid, half ounce.

Give five drops, in thick rice-water, and repeat every three hours; and, if the fever is not too high, and the pulse soft and weak, make a tea of

*Recipe:* Peruvian Bark, half ounce.  
Cloves, one drachm.  
Water, one half pint.

Boil all together for eight minutes, and strain; when settled, give a tea spoonful every hour, with two drops of the above acid in it. Use the liniment externally, and the gargle internally.

If the swelling is great, and putrefaction is likely to take place, the throat may be blistered, and then dressed with a poultice of charcoal and yeast, wrapped in gauze. The warm drink must be persevered in; or a tea, made of charcoal by pouring boiling water on it, may be given to the child freely.

In all cases where the extremities are cool, mustard plasters must be applied to the wrists and ankles.

If the eruption should strike in, in any form of the disease, the child should be put into a warm bath, with salt or mustard in the water, for eight or ten minutes, and its skin rubbed freely with the hand; after which, it should be wiped dry, and covered up in the bed.

Scrupulous attention must be paid to the diet, which should be vegetable entirely, in all cases of scarlet fever.

In malignant cases, the skin, on recovery, will peel off the hands and feet, and subsequently off the whole body. If the patient be not very careful when he gets out, he will take cold, and the glands of the neck will swell and suppurate, and the ears will run, and if great attention be not paid, deafness will probably be the result. They must be kept clean, and laudanum and sweet oil put into them every day, till they get well.

All these things must be attended to scrupulously.

#### OF MEASLES.

The measles are ushered in, like all other febrile diseases, by chilliness, languor, oppression, heat, and thirst; especially the first day, which terminates in a perfectly well-formed fever, with sickness at the stomach, and vomiting in some cases. The fever is generally pretty high, but not uniformly so. The patient has a cough of a peculiarly hard, dry, hoarse sound; the eyes run water, and sneezing invariably accompanies the fever, in the early stage of the disease. The tongue is coated; there is a bad taste in the mouth,—not unlike that of rotten wood,—of which everything taken partakes. Sickness sometimes occurs at the stomach, causing vomiting, but nothing is thrown up except tough white phlegm.



The discharges from the nostrils are abundant. About the third or fourth day the eruption begins to make its appearance, — first on the face and neck, and then on the loins and legs. It is not so scarlet-colored as the eruption in scarlet fever, but is a little elevated on the skin, and has a slight purple hue. It is generally separate, but sometimes it is confluent, ultimately spreading all over the body. In some cases, it does not rise above the surface, and yet it may be genuine measles. It retains its color for three or four days, when it becomes browner, and falls off in bran-like scales.

The cough may be very severe, and harass the patient very much; or it may be lighter, and not so troublesome; and this very much depends on the degree of inflammation in the lungs.

There are different grades of measles, as well as of all other eruptive fevers, and the treatment must necessarily depend upon the violence of the disease. This disease is universally believed to be contagious. But there are many physicians who deny it this character. We are satisfied, however, that it *is* contagious, though we acknowledge that some persons will have a second attack. Perhaps one in ten thousand, after the lapse of fifty years or more, when the susceptibility returns, may have a second attack of measles. Such is also the case with whooping cough and smallpox, and many other eruptive diseases.

**TREATMENT.** — The treatment for measles is simple. If the fever is not very high, all that is necessary is to keep the bowels open. Balm tea should be given, to drive them out, and care should be taken to keep them out, by avoiding the cold air. The patient must drink freely of flax-seed or slippery-elm tea, live on a light diet, and be careful not to take cold.

For a purge, in light cases, give a potion of *senna tea*, sufficient to operate freely; or *Rochelle salts* may be taken in sufficient quantity to keep the bowels open. Be careful to avoid taking cold; drink freely of flax-seed or slippery-elm tea, till the cough is removed, and nothing more will be necessary.

Measles are not, however, always to be found in as mild a form. The epidemical condition of the atmosphere, together with the peculiar character of the measles at the time, makes a vast difference in the violence of the disease; and, owing to those reasons, measles sometimes become malignant, and of a highly inflammatory character, with a strong predisposition to congestion. When such is the case, the difficulty of breathing is great, the lungs swell, the eyes are suffused, the cough is violent, pain in the head

severe, and the pulse full, hard, and strong. The bowels appear to be engorged, and constipated, the urine is highly colored, the tongue is very white or yellow, there is loss of appetite, and sometimes sickness at the stomach; but the throat is rarely sore. In this condition of the system, the patient should be bled freely, and if the pulse is hard, and the difficulty of breathing great, an emetic should be given.

*Recipe*: Ipecac., fifteen grains.  
Tartar, three grains.

Mix. Dissolve in nine table spoonfuls of warm water; give three first, and one every ten minutes, till they operate freely, and then give a glass of warm water every time the patient pukes, till he has three or four operations up. It must then be turned down with a little gruel, and nothing cold must be taken till the operation is fairly over.

If it should not operate well on the bowels, give the following powders:

*Recipe*: Calomel, fifteen grains.  
Pulv. Rhubarb, ten grains.

Mix. Divide into six powders, and give one every two hours, till they operate freely, when the patient should drink some warm herb tea, to assist their operation.

If the symptoms continue severe, the same purgative should be repeated the next day; but if the child is better, the following may be given:

*Recipe*: Rochelle Salts, one ounce.

Dissolve this in a gill of warm water, and give a table spoonful every half hour, till they operate freely; after which, the bowels may be kept open with *castor-oil*, *senna tea*, salts, or *rhubarb*.

The cough which always accompanies measles must be attended to till entirely cured; and for this, Harris' Compound Cough Sirup, or the following mixture, may be given:

*Recipe*: Oxymel Squills, half ounce.  
Wine of Ipecac., two drachms.  
Hive Sirup, two drachms.

Give ten drops, in some warm tea, every two hours, to a child one year old; and so in proportion to age and strength.

*Recipe*: Flax-Seed Tea, one gill.  
Honey, two ounces.  
Tartar Emetic, four grains.

Mix, and give a small spoonful every hour or two. The diet must be light, and the room kept comfortable, but not too hot.

## OF REMITTENT FEVER OF INFANTS BEFORE WEANING.

The form of remittent fever of which we design to treat in this chapter, occurs before the child is weaned, and during the first process of teething.

The first indications of the approach of this disease are, a restlessness at night, and startings in the sleep, as if from sudden frights; or the child may remain awake and be fretful the greater part of the night. Its skin is hot and dry, until towards morning, when a slight moisture breaks out on the face and chest. In the forenoon the child looks pale, with an expression of suffering and discontent; it evinces no disposition to play; the pulse is frequent, contracted, and feels hard under the fingers, and shows an evident increase of unpleasant feelings; as the evening comes on, a red spot arises on one cheek, or both. It is apt to be sick at the stomach, and sometimes vomits; the pulse increases in frequency and strength; the skin becomes hot; the urine is scanty and highly colored, and, in some instances, so acrid that the child will cry out from pain when it is passed.

After the disease has continued some days, a slight cough comes on, with a secretion of more or less mucus, or rattling in the throat or chest; the bowels are irregular and generally costive. The discharges are, however, very offensive; they are apt to be of a muddy brown, or of a light green color, and sometimes they are curdled. Every paroxysm becomes more severe, and lasts longer than the former one. The child now lies in a drowsy state, with its eyes partially closed, and turned upwards, so as, in many cases, to hide the black of the eye. If the disease be neglected, its progress will now become rapid, and all the symptoms of irritation of the brain will come on; the eyes will look dull and heavy; the white of the eye will begin to look a little inflamed, and the countenance of the child will either present the appearance of surprise or of stupor. By degrees, all the symptoms increase, till the brain is evidently oppressed; effusion takes place, and the child dies in a state of heavy stupor, or convulsions.

This, however, is not always the case. In some cases the fever continues without any symptoms of an affection of the brain, but seems to exhaust the little patient by its continuance; or a rapid and obstinate diarrhœa may prostrate and kill it. If this fever be neglected in its early stage, it seldom terminates in less than twelve or fifteen days, and longer in some cases. When

this is the case, the child is pale, weak, and extremely fretful and restless; its bowels are irregular; its pulse is frequent and small; the abdomen is usually very warm, the hands and feet cool, and sometimes the face swells.

This form of fever may terminate by the efforts of the system, without the aid of medicine; and when this is the case, all the symptoms begin to abate on the third or fourth day. Every paroxysm becomes shorter and less severe, the child rests better at night, and the skin feels more pleasant, cool, and soft. When it terminates thus, it is generally brought about by a spontaneous purging, or a profuse secretion of saliva; and "in this case we shall find that one or more teeth have made their appearance."

In this, as well as in all other forms of fever incident to children during the period of teething, the gums should be examined first. If they are much swollen, they should be cut freely, down to the teeth. If it be a jaw tooth, the gum should be divided from corner to corner of the tooth, the cuts crossing each other over the middle of the tooth. Every tooth should be examined, and every gum divided that is swollen.

The condition of the bowels must next be attended to.

If they are bound, the first medicine should be such as would gently, but freely, purge off their contents. This may be castor-oil, a full dose. Or,

*Recipe:* Rhubarb, ten grains.  
Magnesia, twenty grains.

Mix. Divide into three powders. To be given every two hours, in a little sweetened water, till they operate freely.

But if the bowels, instead of being costive, are too loose, and the discharges either thin and green, or of a light color, and smell offensively, then, instead of the medicines prescribed above, the following must be given:

*Recipe:* Calomel, six grains.  
Rhubarb, six grains.

Mix. Divide into three powders, and give one every two hours, in a few drops of plain sirup, till they operate freely. If the last operation is offensive, and of a pale green color, or if it be not offensive, but a pea-green, and the fever continues, give the following medicine:

*Recipe:* Calomel, eight grains.  
Salts Nitre, two grains.  
Pulv. Mace, one grain.

Mix. Divide into four powders, and give as above, till they operate freely. If the discharges are now mixed with yellow, and the fever is lighter, use,

*Recipe* : Sirup of Rhubarb, one ounce.

Of which, a tea spoonful may be given every two or three hours, till it acts on the bowels two or three times. At the same time, if there be fever, give the following drops :

*Recipe* · Spirits Nitre, two drachms.

Mix. Give ten drops, in toast-water, and repeat every hour, till the fever is off; and if ten drops should puke the child, give less. The fever will probably go off with a gentle perspiration. This is the treatment for the first stage of remittent fever.

But should the child have been neglected, or the character of the disease not apprehended till the *second stage* comes on, which is made known by symptoms of determination to the brain, such as heaviness or stupor, a disposition to roll the head from side to side, or throw it back,—the fever continuing longer at each paroxysm, with greater prostration of strength, and the bowels either obstinately costive, or more depraved in their secretions,—much greater energy must be used in the treatment of the case. If the fever is high, and the pulse quick and hard, you must bleed from the arm, and let the blood run till the child becomes faint. If the child is very lean and feeble, bleeding should not be resorted to; but whether it is or is not, the following medicine must be given :

*Recipe* : Calomel, twelve grains.  
Ipecac., two grains.

Mix. Divide into four powders, and give one every two or three hours, till they operate freely. At the same time, you will use,

*Recipe* : Spirits Nitre, two drachms.  
Wine of Ipecac., one drachm.

Mix. Give from six to ten drops every hour, in a little toast or plain water, slightly warm, till the fever subsides.

If the feet are cold, or cool, mustard plasters, well guarded with gauze or thin muslin, should be applied to them; and if the hands be cold, apply the mustard to the wrists. But the plasters should not remain longer than to redden the skin; and, when removed, the parts should be wet with warm cream or sweet milk, to allay the smarting. These medicines should be repeated every day till the fever is broken; and then, if the dis



charges from the bowels are not healthy in appearance, or are of a dark green color, in order to carry this off, and restore a healthy action in the secreting organs, give the following medicine :

*Recipe :* Rhubarb, ten grains.  
Magnesia, twenty grains.  
Pulv. Mace, two grains.

Mix. Divide into five powders, and give one, in sirup, every three hours, till they carry off all the vitiated matter from the bowels.

If any fever should come on during this time, give the drops, as before directed, till it subsides. And if the above powders cannot be readily obtained, castor-oil, mixed in sweetened vinegar and water, will do as well.

*Third stage.* If this disease should not be cured in the first or second stage, but passes into the third, the following symptoms will manifest themselves : The fever will be constant; the extremities more or less cold; the pulse quick, soft and fluttering; the child will be in a stupor, or heavy drowsiness, and will take but little notice of anything. The tongue is brown, instead of white, on the top, and is dry; the face is either pale or flushed on one or both cheeks; the eyes are rolled upwards, so as to hide the most of the black part; the white of the eye is red and inflamed, and sometimes tinged with yellow, so as to give it rather the appearance of water tinged with yellow clay; the breathing is more hurried; swallowing is effected with some difficulty; the urine is high-colored and small in quantity; the ears look pale, and the forehead has more or less of a glossy appearance, and the fingers and toes twitch occasionally. The bowels may be bound, or they may be loose, and the discharges thin and rather green. These are the symptoms of the third stage, and are very dangerous, as they present strong evidences of determination to the brain.

In this stage of the disease, the remedies are to be changed. Many physicians prescribe blisters to the back of the neck, but our own observation and experience have not satisfied us of their utility. Opiates, in small doses, have also been prescribed, in combination with other remedies; but we have never realized any good effects from them, where the brain is affected, or even implicated. In this stage of the disease, we have but little to hope for, yet we should make an effort to cure. We cannot use the lancet, but we should apply leeches to the temples, and not

less than five or six should be applied to each; and, at the same time, three or four should be placed behind each ear, just under the mastoid process, or lump below the hair. When applied in this manner, we have seen all the comatose symptoms vanish before the leeches were full. The bites should, however, be encouraged to bleed as long as the child's strength will bear it. And this may be done by keeping them wet with warm water; and small pledgets of raw cotton, or dry lint, held on with the finger, will soon arrest the bleeding.

If the extremities are cold, apply mustard plasters to them, and place one over the whole region of the stomach and bowels. At the same time, the following embrocation should be applied to the spine :

*Recipe :* Spts. Camphor, two drachms.  
Spts. Turpentine, two drachms.  
Olive Oil, two drachms.  
Carbonate of Ammonia, one drachm.

Mix them perfectly together, and rub the spine, from the hair of the head to the hips, with this liniment, every two hours. It should be well shaken, applied freely, and the application continued for ten minutes each time. It will redden the skin very much, but will not blister.

After the application of the mustard to the extremities and abdomen, you may give,

*Recipe :* Calomel, five grains.  
Magnesia, ten grains.

Mixed. Divide into five powders, and give one every two hours, in a little sirup; and this medicine may be repeated every day, till the stupor or delirium is removed, and the surface is uniformly warm. The calomel may then be omitted, and the following medicine substituted, to keep the bowels open :

*Recipe :* Magnesia, twenty grains.  
Cream Tartar, ten grains.

Mixed. Divide into four powders, and give one once, twice, or three times a day, in sweetened water. Or, you may give of the *simple sirup of rhubarb*, a tea spoonful, as above directed. A small dose of *castor-oil*, every day, will answer the same purpose.

*Diet.* If the child is at the breast, and the mother's milk is healthy, it should take no other diet; but if it cannot suck, it should be fed with the milk. If the breast milk is unhealthy, or the child weaned, its diet should be rice-water, barley-water, arrow-root, or milk and water, equal quantities; slippery-elm, or

flax-seed tea, or thin gruel, boiled until the meal is all dissolved. This should be thin, and not sweetened, but made perfectly plain.

As soon as the child is able to be moved, it should be taken out in a carriage, but not exposed to damp air, or the heat of the sun. Some mild tonic may now be given, such as,

*Recipe*: Huxham's Tincture, one ounce,

of which, fifteen drops may be given, in sweetened water, three times a day; or,

*Recipe*: Tincture of Iron, half ounce.

Give three or four drops of this, in a table spoonful of sweetened water, three times a day. Great care must be taken that it does not eat too much in its convalescence.

OF REMITTENT FEVER OF CHILDREN, AFTER THEY HAVE CUT THEIR FIRST TEETH, AND UNTIL THEY ARE THIRTEEN OR FOURTEEN YEARS OLD.

We have here a period of twelve or thirteen years, in which this form of fever may be justly said to be the remittent fever of children. It rarely occurs exactly in this form before the second year, but may occur at any period from that time up to the age mentioned above.

This form of fever in children is evidently connected with some derangement of the stomach and bowels, some irritating cause having been brought to act there. It not unfrequently comes on suddenly, in consequence of overloading the stomach, even with proper diet, or with some indigestible substances, as nuts, candies, unripe or unwholesome fruits, or high-seasoned diet, improper for children. But in older children, it may be brought on by exposure to wet, playing in the water, sleeping in damp clothes, or in a damp room; and evidently, in larger children, by exposure to miasmatic influence.

The attack generally makes its appearance at night; "the child becomes pale or cold, and is seized with chilliness, which, in most cases, is followed by nausea and vomiting." This is soon succeeded by fever; the skin becomes warm and dry, the pulse is frequent and strong, the child is thirsty, and calls for water frequently; is restless, and generally complains of headache, and pain in the stomach. Towards morning, a light sweat breaks out on the face and neck, and the fever subsides. The child now looks pale, is weak, and has no appetite for breakfast;

wishes to lie down or keep still, and feels fretful. About ten or eleven o'clock, the face begins again to look pale, the hands and feet become cold, and a chill, more or less severe, soon follows. It now feels sick at the stomach, and perhaps vomits. The chilliness may last for a longer or shorter time, but is always succeeded by fever, which lasts till the following morning, when it goes off as at first. These paroxysms occur from day to day.

In the first outset, the tongue is not much coated; but on the second day, it is covered with a white or yellowish coat, which changes to a brown, and, in protracted cases, to a dark brown, or nearly black, and becomes dry. The teeth are covered with a brown sordes, and the breath smells badly; the pulse is frequent, full and quick, but not hard; the bowels are generally bound, and the headache becomes constant. If the child vomits, the headache is relieved for a short time.

After the fever has continued for a few days, the child is apt to be drowsy all the time the fever lasts; and when it is aroused, it is apt to pick at its lips, nose or eyes, or some part of its face or ears, and will continue to do this till the part becomes sore and raw, if not prevented.

If the bowels are not bound, they are too loose; the stools are thin and very offensive, and sometimes of a greenish color, and the urine is generally highly colored, small in quantity, and has a strong smell. The child now loathes every article of diet that can be brought to it, and sometimes complains of severe pains in the bowels, for a few minutes, which not unfrequently induces the parents to believe that the disease is produced by worms.

**TREATMENT.**—As this disease is frequently produced by an indulgence in improper diet, or by loading the stomach with diet otherwise proper for the child, the best way to commence the cure is by administering an emetic.

*Recipe:* Ipecac., ten grains.  
Tartar, two grains.

**Mix.** Dissolve in three or four spoonfuls of warm water; give one fourth at a time, and repeat every twenty minutes, till the child pukes freely, when warm water should be freely given, till it has three or four motions up. It should then take a little gruel to work it downwards; and, if it should not purge in two hours, give the following purgative:

*Recipe:* Calomel, six grains.  
Rhubarb, twelve grains.

Mix. Divide into six papers, for a child two years old, and increase or diminish the dose, according to age. Give one powder every hour, in a little sirup, till they operate freely. If, however, a free operation should not be produced, — which may be the case if the child has eaten too much heavy food, or nuts, candy, or fruits, — give the following medicine :

*Recipe* : Senna Leaves, half ounce.  
Manna Flake, half ounce.

Mix. Boil to a strong tea, in half a pint of water, and give a table spoonful every hour, till it operates freely.

*Recipe* : Castor-Oil, half ounce.  
Spirits Turpentine, one drachm.

Mix, and give one half at first, and the balance in one hour, if the first should not operate. It will frequently be found that the bowels are loaded with hardened fæces, undigested food or fruits, and the above purgatives will have to be repeated several times, before the fever yields. The following drops should be given while the fever is on :

*Recipe* : Spirits Nitre, half ounce.  
Antimonial Wine, one drachm.

Mix, and give ten drops every hour, in balm, or some other herb tea. Or the following powders will do as well :

*Recipe* : Cream Tartar, twenty grains.  
Salus Nitre, six grains.  
Tartar Emetic, one fourth grain.

Mix. Divide into six powders, and give one every hour, in a little balm tea, till the fever is cooled off. A favorite prescription with *Dr. Eberle* was the following :

*Recipe* : Spirits Nitre, two scruples.  
Pulv. Extract Colocynth, two drachms  
Tartar Emetic, one grain.  
Water, four ounces.

Mix well, and give a dessert spoonful every two hours, till the fever is off.

If the discharges from the bowels should become thin and watery, of a light color, or green water, or should they become of a muddy color, and have an offensive smell, give the following :

*Recipe* : Calomel, twelve grains.  
Pulv. Mace, two grains.

Mix. Divide into four powders, and give one every two hours, till they operate freely. They may be given in sugar, molasses, or clabour.



But should the discharges be thick, green, or dark, give the following medicine :

*Recipe* : Calomel, six grains.  
Scammony, twelve grains.

Mix, and divide into six powders; give one every two hours, till the discharges become yellow and consistent, and these may be repeated every day, till the fever yields.

As soon as the fever is off, if the stomach and bowels have been properly cleansed, give the following :

*Recipe* : Salicine, twenty grains.  
Water, one ounce.

Dissolve the salicine in the water, and give half a tea spoonful, in sweetened water, every hour, when the fever is off, to a child two years old, and increase or diminish the dose, according to age. This is far preferable to quinine, for children, or very delicate persons.

A general perspiration will accompany the action of the system when the fever is broken; after which, the bowels may be kept open with some one of the following medicines: *Castor-oil*, *rhubarb*, or *senna tea*. Children rarely need tonics.

The diet through all the sickness should be very light, such as rice, chicken-water with rice boiled in it, &c. The drink should be lukewarm toast-water, balm, hyssop, sage, or dittany tea.

The room should always be freely ventilated in summer, and the child should be covered lightly. When it is not taking calomel, it may occasionally take cold water.

#### OF CATARRHAL FEVER.

“Catarrhal affections, under various forms and grades of violence, are among the most common diseases of infancy and childhood.” This form of fever is most apt to occur in raw, variable and damp weather; and hence it is most frequently met with in the winter and spring. It may also prevail in summer, when, after a long spell of damp weather, it suddenly becomes dry and hot.

Catarrhal fever sometimes prevails as an epidemic, as it has frequently done in Kentucky, as well as the Eastern States. When this is the case, it is generally confined to children.

This disease is characterized by fever, cough, slight hoarseness, some difficulty of breathing, running at the nose, sneezing, and a watery appearance of the eyes, not unlike that in measles.

Sometimes it is ushered in by a chill; at other times, only by a slight chilliness. The whole surface of the body is pale and contracted, and the child appears languid and drowsy, at times, for eight or ten hours before the reaction is fully established; and, at other times, the reaction takes place much sooner. It is apt to complain of pain in the back, head, and legs; the pulse is frequent, somewhat tense and full; the cheeks are flushed, and the skin is dry, but at first not much above the natural temperature; the bowels are inactive, and the urine highly colored.

In the early stage of the disease, the stools frequently show a deficiency of bile, being of a light or clay color. In some cases, a cough and slight hoarseness are the first symptoms; more frequently, however, the cough does not come on till the fever is fully developed. In the first stage of the fever, the breathing is not much interrupted, though there may be a considerable rattling of phlegm in the windpipe; but in severe attacks, the breathing becomes difficult much earlier than in mild cases. And this is owing to the abundant secretion of mucus in the air-cells of the lungs. This symptom is worse in infants that are not old enough to throw off the phlegm. Generally, the more violent the cough in the early part of the disease, the less mucus is thrown off; and when inflammation is about to take place in the lungs, the cough is perfectly dry.

In the ordinary form of the disease, the phlegm is thrown off abundantly in three or four days, and, as the disease advances, the cough becomes more frequent.

The liver is often torpid, in this form of fever; the regions of the stomach and right side frequently swell, giving rise to the popular notion that the child is "liver-grown." The truth is, the liver is torpid, and, consequently, has become engorged with blood. This, by distending the organ, produces soreness, which is manifested on the touch of the fingers. As the disease advances, the stools are changed from a clay color to a light or dark green.

In severe cases, delirium appears in the afternoon or night. The febrile symptoms generally show a distinct remission in the morning, but it is of short duration. The appearance of bile in the stools, if accompanied by a moist skin and a more copious secretion of urine, generally brings an abatement of all the symptoms. On the contrary, when the stools are watery or muddy, or reddish and mixed with little flakes of mucus, like the washing of flesh, and a bloated state of the bowels ensues,

the skin becoming dry and harsh, the case has assumed an unfavorable aspect.

If an engorgement of the lungs takes place, accompanied by a sudden effusion of mucus into the air-cells of the lungs, from an inflammation of these cells, or the substance of the lungs, the case is a very dangerous one, and convulsions, under these circumstances, are very unfavorable. A great disposition to sleep is also unfavorable, as there is congestion either of the lungs or brain.

When the disease is about to terminate favorably, a thick mucus is generally discharged from the nose and lungs; and this, with the cough, may continue for a week or two after the fever leaves the child.

**TREATMENT.**—There are several indications to be attended to in the cure of this disease. We must restore the action of the liver and skin, moderate the excitement of the heart and arteries, allay the irritation of the mucous membrane of the air-vessels of the lungs, and prevent local congestion or inflammation.

If the fever is high, the skin hot and dry, and the breathing difficult, the child should be bled from the arm till it looks pale. But if the fever is not high, and the breathing difficult, the bleeding may be omitted. The following medicine, for a child one year old, should be given, and the dose increased or diminished, according to age :

*Recipe :* Calomel, twelve grains.  
Ipecac., two grains.  
Salts Nitre, two grains.

**Mix.** Divide into six powders, and give one, in a little sirup, every two hours, till they operate freely on the bowels. If the discharges are green and thick, it has operated to a good purpose, and the dose should be repeated the next day. But if the operations are light-colored, green and thin, give this medicine :

*Recipe :* Calomel, twelve grains.  
Pulv. Rhubarb, six grains.

**Mix.** Divide into four powders, and give them as above directed. If this should not produce thick, green, or dark discharges, the following must be given :

*Recipe :* Calomel, six grains.

Divide into two powders, and give these two hours apart. This should be followed by a dessert spoonful of *castor-oil*, or,

*Recipe :* Senna Tea, one ounce.  
Manna, half ounce.

Dissolve the manna in the tea, and give a dessert spoonful every half hour, till the dark discharges are removed, and yellow discharges follow.

The bowels may be kept open, after this, with the *senna tea*, or *rhubarb*; or,

*Recipe*: Magnesia, one drachm.  
Cream Tartar, one drachm.

Mix. Divide into six powders, and give one every four or six hours, in sweetened water, so as to keep up a regular action on the bowels.

There is always a cough attending this form of fever. It may come on early in the disease, or not till the second or third day; sometimes, indeed, not till the fourth day. But, let it come on when it may, as soon as the phlegm begins to rattle, or a wheezing sound is heard in the throat or lungs, the following sirup must be given:

*Recipe*: Oxymel Squills, half ounce.  
Hive Sirup, two drachms.  
Wine of Ipecac., two drachms.

Mixed. Give ten drops every hour, in a little of the drink named below. This sirup should be continued through the whole course of the disease, and after the fever has abated, until the cough is entirely removed. But should you be situated in the country, where you cannot obtain the above sirup, you will find the following very good:

*Recipe*: Flax-Seed Tea, two ounces, — made thick.  
Antimonial Wine, one drachm.  
Honey, Strained, half ounce.

Simmer them together till they are properly mixed, and give a tea spoonful every hour.

In all cases where the fever continues to be high, and the skin hot, in the interval between the doses of the powders above prescribed, the following drops may be given:

*Recipe*: Spirits Nitre, three drachms.  
Antimonial Wine, one drachm.

Mix, and give ten drops every hour or two, till the fever is removed. At the same time, if the feet and hands are hot and dry, they should be bathed with tepid vinegar and water. The water should be heated and poured into the vinegar, which will reduce it to the proper temperature, and, at the same time, preserve the medical property of the vinegar.

If the feet and hands become cold at any time, mustard plas-

ters should be applied to them, covering the plaster with gauze or thin muslin, wet with warm vinegar. Some eminent authors recommend blister plasters to be applied to the breast of children laboring under this disease, when the lungs are inflamed. We have often tried them, but think they torture the child more than do it good, and consequently have not used them for many years. We think, moreover, that we have seen unfavorable effects produced by them.

The diet of children laboring under this disease, if they are not weaned, should be breast milk alone; but if weaned, it should be gruel, arrow-root, milk and water lightly sweetened, &c. The drink should be, slippery-elm, flax-seed, balm, hyssop or sage tea, rice-water, thin arrow-root, or some other mucilaginous drink.

When the child begins to recover, great care should be taken not to increase the diet too soon; nor should it be exposed by exercise, lest, from some of these causes, it should be in danger of a relapse.

#### OF APOPLEXY OF THE LUNGS.

We have not seen this disease treated of under this name by any author.

Infants, from the age of one month to the close of the period of cutting their first teeth, are liable to congestion of the lungs, with little or no febrile action, which, when properly examined into, and the symptoms closely traced, gives all the signs of a venous, engorged, congested or apoplectic condition of the lungs; and, for this reason, we have called it apoplexy of the lungs.

The symptoms are these: the child is attacked with a cough; the breathing soon becomes laborious, attended with a wheezing sound; the face is very pale; the whole surface cold, and generally soft or moist; the pulse frequent, but not hard or firm; and the child looks distressed and anxious. In severe cases, the cheeks become cold and the lips purple, while the other parts of the body are of the natural temperature. The bowels are costive, and the urine scanty, but generally natural and healthy in appearance. After a while, a cold perspiration breaks out upon the face. A dry cough attends the whole course of the disease, till, towards the termination, if it be favorable, it becomes loose and rattling. In violent cases, the pulse becomes small and quick, and the child sinks rapidly. The great difficulty of breathing resembles very much that in a violent attack of the



asthma; occasionally remissions occur, when the pulse becomes fuller and slower, and the countenance will brighten up a little.

When the disease is tending to a fatal termination, the child becomes drowsy, and breathes hard, and soon becomes insensible, when the scene will soon be closed, either by suffocation or convulsions.

This disease may continue for three or four days, but it more frequently proves fatal in eight or ten hours.

It may be produced by any exposure to a sudden change of temperature, or check of perspiration. It is not uncommonly one of the fruits of hardening children, — or, as some mothers say, “teaching them to be hardy,” — a most ill-advised and unfeeling act. It may, however, occur when the mother has taken all diligence to protect her child. The bedclothes may have been incautiously thrown off the child in the night, and thus cold may have been taken; but it is often produced by changing long for short sleeve dresses, in damp, cool weather, and warm, for light, thin clothing. It is to be lamented that mothers, in making a display of a fine child, are often laying the foundation for that disease which will soon take it to the grave.

**TREATMENT.** — When the prominent symptoms of this disease are closely examined, the breathing will be found extremely difficult; the face pale and cool, with a hard, dry, convulsive cough; the lips purple, and the pulse frequent, but neither hard nor firm.

The remedy is plain. The lungs must be relieved from this apoplectic condition, and inflammation prevented. In this stage of the disease, the pulse will rarely admit the use of the lancet; but where it will, bleeding from the arm should be the first thing resorted to. But should the pulse be too weak, and the surface too cold, to admit of bleeding, the child should be put into a warm bath in which salt or mustard has been strewn, the surface rubbed in this till it becomes warm all over, and the pulse fuller, and stronger. When the child is removed from the bath, it should be wiped dry with a rough towel, that the skin may be kept excited. Bleeding may now be attempted, as the pulse will be sufficiently full to authorize it; and cups should be applied between the shoulders. Follow this treatment with the following medicines:

*Recipe:* Ipecac., ten grains.  
Tartar, one grain.

Mix. Dissolve in three table spoonfuls of warm water, and give three tea spoonfuls at first, and one every fifteen minutes, till the child pukes freely, when it may take a tea spoonful or two of salt and water, to turn it down.

If it should not operate freely on the bowels in two hours, give :

*Recipe :* Calomel, twelve grains.  
Salts Nitre, two grains.

Mix. Divide into four powders, and give one every hour, in sirup, till they operate freely. If the extremities become cool, apply mustard plasters to them, and use the following liniment :

*Recipe :* Spirits Turpentine, two drachms.  
Spirits Camphor, two drachms.  
Tinct. Cantharides, two drachms.  
Olive Oil, two drachms.  
Carbonate Ammonia, one drachm.

Mix well, and shake the vial well before using the liniment; rub it all over the breast, and down the backbone, every two or three hours. This will produce as much counter irritation as the child can bear.

*Recipe :* Calomel, twelve grains.  
Rhubarb, six grains.

Mix. Divide into three powders, and give one every two hours; or,

*Recipe :* Blue Mass, twelve grains.  
Scammony, six grains.

Mix. Divide into three powders, and give them as above.

When the fever has subsided, and the disease is conquered, the bowels should be kept open with,

*Recipe :* Calcined Magnesia, one drachm.  
Cream Tartar, twenty grains.

Mix, and divide into four papers, and give one once in four or six hours, in sweetened water, so as to keep the bowels open.

As soon as the apoplectic condition of the lungs is removed, the phlegm will begin to secrete, or pour itself out into the air-cells of the lungs; and then, the following mixture must be given :

*Recipe :* Oxymel Squills, half ounce.  
Hive Sirup, two drachms.  
Wine of Ipecac., two drachms.

Mix, and give twelve or fifteen drops every hour, so as to keep the phlegm loose; but should the child not be able to raise the phlegm, so as to relieve the lungs, you must increase the quan-

tity of the sirup, till the child pukes freely, and thus throws off the phlegm.

In similar conditions of the lungs of children, a favorite medicine with *Dr. Parris*, of Philadelphia, is the following compound :

*Recipe* : Tincture Asafœtida, three drachms.  
Ol. Amber, one drachm.

Mix, and give twenty drops every half hour, till the child breathes easy.

The remedy of *Dr. Eberle*, in similar cases, was :

*Recipe* : Gum Fœtida, one drachm.  
Mint Water, one ounce.

Rub the gum with the water, till they are properly mixed, and give a tea spoonful every two hours, or just as much as the strength of the child can bear.

A tea, made of the Seneca snakeroot, and sweetened, may be given with great benefit when the phlegm is tough and hard to raise. It should be given in sufficient quantities to cause puking. Breathing the smoke of rosin is highly spoken of by many eminent physicians, as a relief in case of difficult breathing. May it not do good here? The rosin may be burnt on a hot shovel in the room where the child is lying.

Great care should be taken, in these cases, that the child be not exposed too soon after it begins to recover.

If it be not weaned, its diet must be breast milk ; if weaned, the diet must be of the lightest kind, avoiding everything that has flesh of any description in its composition.

#### OF ACUTE BRONCHITIS.

This disease resembles, in many respects, apoplexy of the lungs. They are both produced by the same cause, and the great characteristic distinction is this : in acute bronchitis, there is, in addition to an engorged state of the lungs, more or less inflammation. This would argue that the existing cause had not been so powerful in this case, and more time had been given for inflammation to take place.

The symptoms of acute bronchitis are, a cold, contracted state of the surface, or chilliness ; a languid and pale appearance of the countenance ; a slight cough, and some difficulty in breathing ; and an increase in the strength and frequency of the pulse. The cough increases, and its sound is stifled and hoarse, and the

breathing becomes more and more labored. If the little patient can talk, it will make you sensible that it feels a weight on its breast, but rarely complains of pain. But when the cough is violent, "the child may cry out, as from pain."

If the disease be at all complicated with pleurisy, there will be catches in the breathing, and the countenance will indicate pain. The cough is often dry at first; but in the course of twelve or twenty-four hours, the mucus secretes freely, and there is a rattling sound in the lungs or throat.

It is not uncommon for the child to vomit spontaneously several times in the course of twenty-four hours. The stomach frequently swells, and sounds as though it were full of wind.

As the disease progresses, the child breathes harder, the rattling increases, and signs of great debility are manifested. It is always more or less painful to the child to be raised, or to sit up and lean forward. The cheeks are rarely flushed, but most commonly pale, and the eye presents an expression of anxiety.

Towards the close of the disease, the lips sometimes look purple; the difficulty of breathing is not uniform, being sometimes comparatively slight. So also with the cough. Towards the close of the disease, it occurs in paroxysms.

The progress of this disease is sometimes rapid, proving fatal in two or three days; while, in other cases, it may last for eight or ten days. Much drowsiness, and twitching of the fingers and toes, indicate great danger. In such cases, the child either strangles, or dies in a convulsion.

**TREATMENT.** — In every form of inflammation of the lungs, — whether it be situated in the mucous membrane of the air-vessels, as in bronchitis, or in the substance of the lungs, as in pneumonia, or on the outer surface, as in pleurisy, — the use of the lancet is an all-important remedy. But for this, as well as all other remedies, there is a proper time; and if this be not attended to strictly, much harm may be the result.

The proper time to use the lancet, in bronchitis, is in the early stage of the disease, when the fever is high, the pulse hard, the breathing oppressed, and the cough dry and hard. The bleeding should then be continued, till a decided impression is made on the system. The pulse will then soften, and the skin become relaxed, and if a perspiration break out, the effect will be so much the better.

If, however, the case has been neglected, till the lungs are filled with phlegm, bleeding should not be resorted to, but

leeches may be applied to the breast, or cups between the shoulders. This should be followed by a dose of calomel, large enough both to puke and purge.

*Recipe* : Calomel, ten grains.

Give this at one dose. It will be likely to puke the child two or three times, and then turn down on the bowels, and purge it once or twice. Should it not purge, however, in three hours, give the following :

*Recipe* : Calomel, ten grains.  
Rhubarb, six grains.

Mix, and divide into three powders ; give one every two hours, till they operate freely. If the inflammation does not abate, that is, if the breathing continues to be difficult, and the cough dry, you should give the following sirup :

*Recipe* : Cox's Hive Sirup, two drachms.  
Wine of Ipecac., one drachm.  
Spirits Nitre, one drachm.

Mix, and give half a tea spoonful every fifteen minutes, till the child vomits freely. Should the symptoms of inflammation continue, a blister plaster may be applied on the breast ; but when the skin becomes highly inflamed, it must be removed, and a flax-seed poultice applied over the inflamed part.

The bowels may be kept open with the following powders :

*Recipe* : Calomel, three grains.  
Rhubarb, six grains.  
Ipecac., three grains.  
Salts Nitre, three grains.

Mix. Divide into six powders, and give one every three or four hours, so as to produce two or three motions from the bowels in twenty-four hours.

When the mucus begins to secrete in the lungs, and the phlegm to rattle, give the following sirup :

*Recipe* : Oxymel Squills, half ounce.  
Hive Sirup, two drachms.  
Wine Ipecac., two drachms.

Mix, and give ten or twelve drops every hour, in some of its drink ; or, you may give *Eberle's* mixture.

*Recipe* : Tartar Emetic, two grains.  
Salts Tartar, two drachms.  
Water, two and half ounces.  
Honey, one and half ounces.

Mix properly, and give a tea spoonful every hour or two.



If the child be very much prostrated, and needs a stimulant, give the following :

*Recipe :* Carbonate Ammonia, forty grains.  
Extract Liquorice, two drachms.  
Acid of Squills, two drachms.  
Pure Water, four ounces.

Mix intimately, and give half a tea spoonful every hour or two, in its drink. In extreme cases, where the child is likely to sink, *Hoffman* declares that nothing is so beneficial as the following medicine :

*Recipe :* Flowers of Benzoine, one grain.  
Pulv. Gum Camphor two grains.  
White Sugar, twelve grains.

Grind them fine together, and divide into four powders. Give one every two hours. Two or three drops of water, in a spoon, will mix one of these powders.

Opium should not be given, in any form, in this disease.

In the latter stage of this disease, where the child is so harassed that it cannot sleep, much benefit may be derived from the use of the following medicine :

*Recipe :* Tincture Hyoscyamus, two drachms.  
Antimonial Wine, two drachms.

Mix, and give from six to ten drops every four hours. This will tranquillize the system, and produce a gentle perspiration.

The diet should be very light, and the drink mucilaginous.

#### OF PLEURISY.

Children are much more subject to pleurisy than is generally supposed.

Exposure to the vicissitudes of weather, or any of the causes that produce inflammation of the viscera of the chest, may produce pleurisy; but a very fruitful source of this disease is the exposure of the naked arms to the chilling blasts of frosty air, or the feet or legs to damp or cold.

The symptoms are, a chilliness, with a pale, contracted surface, which is soon succeeded by a high fever; the skin becomes very dry and warm; the face flushed; the pulse frequent, full and strong; the breathing is hurried, short, and somewhat oppressed, particularly when the child is lying down. The cough is dry and short, and the child tries to stifle it as much as possible, as every cough produces pain. This pain is always

increased by lying down, which is evinced by the crying of the child, as well as by the expression of the features.

When only one side is affected, there is more pain produced by lying on that side; but when both sides are affected, the child lies easiest on its back, with its head raised.

If the disease is not speedily relieved, these symptoms grow more and more severe, and if any mucus is thrown up, it is apt to be streaked with blood. Towards the end of the disease, the cough is attended with a rattling sound in the windpipe, the hands and feet become cold, and the child finally sinks into a state of stupor. The pulse becomes irregular and intermittent, the feet swell, the breathing becomes short, and a frothy fluid oozes from the mouth. The muscles of the abdomen and diaphragm seem to perform the office of respiration with difficulty; for the expansion of the chest increases the pain in the pleura, and therefore the child avoids it as much as possible.

The skin becoming uniformly moist, the pulse soft and less frequent, with a free discharge of mucus from the lungs, and an ability to rest on either side, are favorable symptoms. But the occurrence of diarrhœa, stupor, or convulsions, or great distress, or anxiety, when placed in a recumbent posture, particularly if the breathing be attended by a wheezing sound in the windpipe, and the pulse small and irregular, are to be regarded as unfavorable signs.

**TREATMENT.**—Pleurisy cannot be safely and correctly treated without the use of the lancet. Bleeding, therefore, must be resorted to as soon as we are satisfied that the disease is pleurisy. The blood should run till the pulse becomes soft and compressible under the finger; after which, if it be necessary to take more blood, leeches should be applied over the seat of the pain. But if leeches cannot be obtained, cups will do as well.

The seat of the pain may easily be ascertained by pressing with the finger on the sides and breast, when signs of pain will be manifested by pressure on the part affected. As soon as the bleeding is over, the following medicine should be given:

*Recipe:* Calomel, twelve grains.  
Salts Nitre, two grains.  
Pulv. Ipecac., four grains.

**Mix.** Divide into four powders, and give one every two hours, till they operate freely. If the fever and inflammation do not subside after the operation of the medicine, a blister plaster may be

applied over the seat of the pain, and allowed to remain till it draws. It must then be dressed with an emollient poultice.

If the fever and symptoms of inflammation still continue, give the following cooling powders :

*Recipe :* Salts Nitre, twelve grains.  
Tartar Emetic, half grain.

Mix. Divide into twelve powders, and give one, in a little balm tea, every hour, till the fever is cooled off.

*Dr. Eberle* prescribes the following mixture :

*Recipe :* Salts Nitre, forty grains.  
Extract Liquorice, two drachms.  
Tartar Emetic, two grains.  
White Sugar, half ounce.  
Pure Water, three ounces.

Mix, and give from one to two tea spoonfuls every hour or two, according to the age of the patient, till the fever is cooled off. If the fever return, and the skin is very dry and warm, and the bowels are not open, give the following powder :

*Recipe :* Calomel, three grains.  
Ipecac., three grains.

Mix. Divide into three powders, and give one every hour, till all are taken. If they should not operate, in one hour more, give a dessert spoonful of *castor-oil* ; and if the fever return, give some of the above medicines ; or,

*Recipe :* Tartar Emetic, one grain.  
Water, twenty-four tea spoonfuls.

Mix, and give a tea spoonful every hour, till the fever is cooled off.

The bowels must be kept open with some gentle purgative, such as *sirup of rhubarb*, *castor-oil*, or *magnesia*, till the child gets well.

As soon as the inflammation begins to subside, the cough will become loose, and the phlegm rattle in the throat.

Sirup should then be given.

*Recipe :* Oxymel Squills, half ounce.  
Hive Sirup, two drachms.  
Wine of Ipecac., two drachms.

Mix. According to the age of the child, give from ten to twenty drops every two hours, in a little of its drink.

If the above medicines cannot be procured, give the following .

*Recipe :* Flax-Seed Tea, two ounces.  
Tartar Emetic, half grain.  
Strained Honey, one table spoonful

Mix. Give a tea spoonful every hour or two, till the cough is removed, which is often the last symptom of the disease.

The drink should be slippery-elm, flax-seed, or marsh-mallow tea, rice-water, or thin gruel.

The diet must be of the lightest kind, such as rice-water, barley-water, thin sago, arrow-root, balmi tea, &c. If the child be at the breast, breast milk will be its best nourishment.

A general moisture on the surface, with a clean tongue which has been white before, an ability to lie on either side, and a cheerful countenance, are favorable signs of a recovery.

#### OF DROPSY OF THE BRAIN.

Dropsy of the brain is an insidious disease. It is frequently several weeks from the time the first and most remote symptoms appear before it shows itself in its full character.

In the first stage of this disease, manifestations of an unusually irritable condition of the brain occur, and continue for several weeks before it is fully developed. During this period, the patient manifests an irritable disposition, sleeps badly, grinds his teeth in his sleep, and is apt to awaken with starts and screams, as if frightened. If the child is very young, it will start and scream out, as if it had been stung with a pain.

The bowels are generally irregular, and the evacuations unhealthy. These symptoms, however, do not always terminate in inflammation of the brain, but may pass off, and the child gradually recover its health. But when they *do* exist, if an exciting cause be applied, such as painful teething, cold, or some derangement of the bowels, from improper food, or crude, unripe fruits, candies, or nuts, this condition of the brain will be more or less aggravated, until actual inflammation takes place.

New symptoms now appear, and characterize the inflammatory stage of the disease. The child begins to feel pains, which are very severe, in the head and abdomen, occasionally. They are not, however, of long continuance. The child becomes more and more irritable and restless; the countenance is pale, and expressive of suffering, marked by an occasional flush on one cheek. The eyebrows are, at times, contracted into a peculiar frown, and the eyelids are not fully spread; the eye becomes very sensitive to light; the appetite is variable, sometimes voracious, and sometimes quite the reverse. As the disease increases, the pain in the head becomes more intense. It is not, however, constant, and sometimes it goes off entirely for a short time.

The pain is generally seated in the forehead, and passes backwards, and through the temples; and when this is the case, the child will manifest it, by frequently putting its hand to the forehead. *Dr. Eberle* says he "has seen instances where the child kept its hand constantly to the forehead, and would not suffer it to be removed."

The stomach is more irritable; the child throws up almost everything it takes. It cannot be raised up without complaining very much, and it is frequently the case that the stomach will not retain anything, except in a recumbent position. In the early part of the disease, the patient wishes to have its head raised a little when it sleeps, and is apt, when awake, to turn from side to side of the bed, and moan. In some cases, the pain in the head subsides immediately on the occurrence of the vomiting. The child sighs deeply and frequently, which is a symptom that effusion is taking place.

In the latter part of the inflammatory stage, delirium is apt to occur; but, if the child is old enough to talk, it may generally be aroused sufficiently to give a rational answer. At this time, the skin is dry, and above the natural temperature. "The pulse is frequent, quick and tense, or sharp, but seldom full." The tongue may be clean, or coated with a thick, white fur, but gradually turns dark, dry and rough.

After these symptoms continue for an indefinite period of time, a new series comes on, which characterizes the third stage of the disease, in which effusion takes place. The inflammation which before existed has now brought about a "disorganization," or deep functional derangement, of the brain. The delirium returns more frequently, and continues longer; the countenance exhibits a peculiar expression of surprise, and sometimes stupor, which it is difficult to describe, but, when once seen, is not easily forgotten; the white of the eye presents a suffused or reddish appearance; the pupils are either dilated, or very much contracted; the eye is, in some cases, very sensitive to the light, and, during sleep, it is turned up, so as to hide the black under the upper lid. There is a great disposition to sleep, with an inattention to surrounding objects; and if the child be aroused, the stupor soon returns again. It rarely speaks words of more than one syllable, and this condition continues to increase, till the stupor is complete.

This symptom is more constant and certain than any other in the third stage of the disease, and is apt to be succeeded by a



paralysis of one hand and arm, or one foot and leg, sometimes extending over one entire side.

It is a fact well authenticated, that inflammation may go on in the brain, without manifesting itself by pain, or any other symptom indicative of its existence. In this case, paralysis may come on before either the physician or parent is aware that a serious disease has attacked the child. This paralysis in infants is first noticed by a tremulous motion of one arm, with the hand firmly bent inwards, and the thumb clenched in the hand, and this, in a short time, terminates in a complete paralysis of the arm.

The upper eyelids show a paralytic fall, and cannot be raised but by a strong effort of the frontal muscles; a squinting of the eye is apt to precede the paralysis of the eyelid.

Effusion has now taken place in the brain, and a *fatal calm* ensues, in which the little patient appears to be much better. Both friends and physician are liable to be deceived by it, and think the child is about to recover. But, in less than twenty-four hours, the delusive calm is interrupted by violent convulsions, which at once decide the fate of the patient; and now all the symptoms become aggravated. The pulse becomes intermittent and irregular for a short time; again it changes, and becomes frequent, quick, small and corded; the power of hearing and seeing is lost, but the sense of feeling generally remains to the last. The unaffected arm is apt to be kept in motion.

The causes which produce inflammation and dropsy of the brain are various. Some authors are of the opinion that this disease is hereditary in some instances. *Dr. Eberle* says, he "knew several families, who had lost nearly all their children by this indomitable malady."

Children that are subject to a strong determination of blood to the brain are, perhaps, more liable to this disease than others of a different temperament. The size of the head appears to exercise no peculiar influence in predisposing to this disease. There is more reason to believe that a scrofulous taint has this effect. In a large proportion of cases, *Dr. Mills* found, on examination after death, "unequivocal appearance of scrofula." In twenty-two cases which came under the observation of *Dr. Percival*, "eleven were decidedly scrofulous."

It is said that the external causes which most commonly excite this disease into action in children are blows, or falls, upon the head. But, unless the injury be sufficiently severe to

produce concussion of the brain, we doubt the correctness of the remark.

The drying up of any long-accustomed discharge, such as sores behind the ears, repelled itch, or any other humor, especially when accompanied by painful teething, or a deranged state of the bowels; a badly-treated remittent fever, or any of the forms of diarrhœa or cholera-infantum, may terminate in this disease, especially if the stomach and bowels are loaded with improper food, or any indigestible substance.

Perhaps the remote cause of this disease has its seat in the stomach and bowels fifteen times in twenty. Parents are too careless of their children's digestive powers, and the articles they take into their stomachs.

Worms may excite this disease. Whooping cough very often terminates in this way; and during the convalescence from measles and scarlet fever, children, if exposed, are liable to be attacked with it.

We believe that, in cases of relapses from other diseases, it is not necessary for the system to go through all the inflammatory stages before effusion takes place in the brain; but it may take place without the inflammatory symptoms, and all the consequences of effusion follow.

**TREATMENT.**—Let it not be forgotten that the most frequent cause of this disease is laid in the stomach and bowels. Attend, therefore, to every derangement there, by using the appropriate remedies, as prescribed under their respective heads, and remove the remote cause in time.

“There are three principal indications to be kept in view in the treatment of this disease,” and they may, in a few words, be arranged as follows. *First.* To moderate the general febrile excitement. *Second.* To prevent congestive inflammation and irritation of the brain. *Third.* To prevent an effusion from taking place in the brain. When we fail to fulfil these indications, we fail to cure the disease.

Unfortunately for the child, this disease is not often detected in its incipient stage, on account of the gradual and insidious manner in which it makes its approach. When we are aware of the derangement of the stomach and bowels, we should, according to the character of that derangement, direct our remedies. Purgatives are the most valuable we possess for correcting the depraved condition of the digestive organs.

When the discharges are thin, offensive, and light-colored, give the following medicine, for a child two years old :

*Recipe* : Calomel, four grains.  
Rhubarb, four grains.

Mix, and divide into three powders ; give one every two hours, till they operate freely. If the passages are natural and healthy at the last operation of this medicine, it is needless to give any more. But if they are green and unhealthy, it should be followed, the next day, with,

*Recipe* : Simple Sirup Rhubarb, half ounce.

Of which, a tea spoonful should be given every two hours, till they operate well ; or you may give the following medicine :

*Recipe* : Calcined Magnesia, half drachm.  
Cream Tartar, ten grains.

Mix. Divide into three powders, and give one every two or three hours, in sweetened water, till they operate freely. If this corrects the discharges, the disease may be arrested in its outset ; but if the passages are not corrected by these medicines, the first prescription must be repeated. Should it be necessary, it may be given every day for three or four days, and then every other day for as long a time.

*Drs. Yates and Spurzheim* admit that this disease has its origin in the stomach and bowels, and secondarily affects the brain ; and this being so, the above practice will always be found to be correct.

The gums must be examined, and, if inflamed, must be cut freely to the teeth.

The diet must be particularly attended to, for the appetite is sometimes very craving in the incipient stage of this disease. Improper food should not be taken, nor the stomach overloaded with proper food. If these things are not attended to, all remedies will fail to cure.

Everything stimulating, either as a diet or drink, must be avoided.

If sores have been discharging from behind the ears, and have been dried up, and irritation of the brain exists, with febrile symptoms, blisters should be applied to the seat of the sores, and kept running for several days. If these things be properly attended to in time, the disease may be arrested in the first stage.

But should the case be neglected, and the first stage pass away, and the second stage be ushered in, it will be noted by an

increase of fever, and pain in the head; a tense, quick pulse, resisting and active. The liver is engorged, and the bowels are either too loose or bound. An active course of treatment is now requisite, or, in all probability, all after remedies may fail to cure.

We have said that the pulse is tense and quick. The child should be bled from the arm till it becomes faint, when an efficient purgative should be given; and as this disease cannot be well managed without calomel, you should immediately give,

*Recipe:* Calomel, twelve grains.  
Ipecac., two grains.

Mix. Divide into two powders, and give them two hours apart. If they should not operate in two hours more, give a full dose of castor-oil.

If the fever arises after the operation of the medicine, and the pulse is full and strong, bleed again from the arm; but if the pulse is not full, or of sufficient strength to admit of the use of the lancet, leeches should be applied to the temples, or behind the ears, and around the neck at the edge of the hair, which, perhaps, is better.

The purging should be repeated every day, with sufficient activity to procure three or four evacuations. Calomel is our sheet-anchor in this disease.

*Recipe* Calomel, six grains.  
Magnesia, twelve grains.  
Cream Tartar, six grains.

Mix. Divide into four powders, and give these every two or three hours. If they should not operate well, give the following:

*Recipe:* Strong Senna Tea, two ounces.  
Manna, half ounce.

Dissolve the manna in the tea, and give it at four doses, half an hour apart, till free evacuations are obtained; and something of this kind should be given every day, so as to procure three or four evacuations.

This is a disease of confessedly difficult treatment; and in order that the mother may be armed with all the knowledge that can be rendered available, we will here give the practice of several eminent physicians.

*Dr. Mills*, in the stage in which we recommend the use of the lancet, says: "The temporal artery, or a vein in the arm, should be opened, and the blood allowed to flow, until an obvious

impression is made on the system, or until the morbid actions of the vascular system of the brain are modified, or totally changed. That such an effect has taken place, may be known by a paleness of the countenance, a shrinking of the features, and a tendency to deliquium, (fainting,) or by a diminution of a renewal of pain, heat, weight, or uneasiness of the head."

Nearly all the French writers are great advocates of leeching and cupping in these cases; but physicians of other countries differ very widely from them. Mr. North says that he "never knew a well-marked symptom of determination to the head removed by leeches, however freely they were applied." We are bound to state a different result in our own practice, having seen the most violent spasmodic convulsions remedied by twenty-four leeches applied to the temples and behind the ears of an infant that had been convulsed for six hours. The child was not more than eighteen months old, and recovered, after being freely purged with calomel.

*Dr. Eberle* says: "After the impetus of the circulation has been moderated by the lancet, leeching the temples, and along the posterior parts of the ears, is a valuable auxiliary in the treatment of arachnites, or *inflammation of the brain*. All experienced physicians say that purgatives are essential in the cure of this disease.

*Dr. Schene* says that, "The alimentary canal is torpid, and imperfectly performs its functions, admitting an accumulation of feculent matters; or that the secretions flowing into it are vitiated, or diminished in quantity; circumstances which are ascertained by the peculiarity in the appearance, or the pungent fetor, of the stools. We must, by steadily pursuing the purgative plan, endeavor to effect a change; for while this is produced in the appearance of the stools, we are effecting a most important change in the hepatic system, (in the liver,) alimentary canal, and all the parts included in every organ essential to life which is connected with them."

*Dr. Eberle* says, "In symptomatic cases, depending on primary irritation of the *bowels*, the milder purgatives, after the first thorough evacuation of the bowels, will, in general, be more beneficial than the repeated use of very active purgatives."

It is not to be understood from the above remarks, that the doctor is not in favor of the repeated use of calomel in inflammation of the brain. On the contrary, he says, "In idiopathic *inflammation of the brain*, the intestines are generally very torpid



and can seldom be sufficiently moved by the milder purgatives. In cases of this kind, it is often necessary to resort to the most active catharics, in order to procure adequate evacuations from the bowels. The same difficulty sometimes occurs in cases attended with a great accumulation of fecal matter in the intestines;" in which case, he says, "*calomel* should always enter largely into the purgatives employed in this disease."

In some cases of dropsy of the brain, unless you can bring the system to yield to the constitutional effort of *calomel*, the disease will never yield, but terminate in death. This truth has been tested by Doctors *Percival*, *Dobson*, *Rush*, *Cheyene*, *Mills*, *Eberle*, and many others of equal celebrity.

After the fever has been subdued, all intestinal accumulations carried off, and the determination to the brain subdued, if irritation of the bowels remain, some mild form of anodyne may be given, to procure rest at night. Drs. Brooke, Percival, Cheyene, Crampton, and some others, speak highly of *Dover's powders* for this purpose. They are composed of the following medicines:

*Recipe*: Pulv. Opium, one grain.  
Pulv. Ipecac., one grain.  
Sulphate Potash, eight grains.

Mix these perfectly in a mortar, and divide into eight powders, and, to a child two years old, give one in a little sweetened water, every hour, till rest is procured. A gentle perspiration will probably ensue. If it does not, the powder should not be repeated.

*Dr. Monro* says he has "cured several cases of this disease, by a plaster composed of tartar emetic and wax ointment, applied to the head, in conjunction with the internal use of *calomel*, combined with James' powder." The tartar emetic ointment is conveniently made in the following manner:

*Recipe*: Tartar Emetic, two drachms.  
Hog's Lard, one ounce.

The lard to be used in the winter, and mutton tallow in summer. Mix them well together, and you have the ointment. Spread a plaster and apply it over the part, or rub it in with the finger, three times a day, till the pustules are full. The pustules should be opened when full, and the sores dressed with tallow or sweet oil.

Mr. Newham directs the use of green tea for a child, when there is a strong tendency to inflammation of the brain. He says, "The efficacy of green tea has been strongly marked in my practice;" and he recommends its use in the following lan

guage: "Exhibited during the early symptoms, as soon as a sufficient quantity of blood has been taken, and before effusion occurs, it has proved a more powerful means than any other we possess, of controlling the morbid action; which, if suffered to proceed to its second stage, is scarcely to be overtaken by any treatment."

Nothing is more common in this disease than the application of a blister to the shaven scalp. We have often seen it tried, but have rarely known the good result from it that was expected, and have found nothing so eminently beneficial as ice applied to the top of the head. It should be broken fine, enclosed in a bladder, and kept constantly applied. The little patient is always composed, and the inflammation lessened by it. When ice cannot be had, the coldest water that can be procured should be applied, by keeping cloths constantly wet in it, and laid on the head; or, what would be better, by putting the water into a bladder, and laying it on the head, first wetting the hair well with the cold water, which must be renewed as often as it becomes warm.

The diet in this disease should be nothing more than a little rice-water, barley-water, or green tea, slippery-elm or flax-seed tea; and a little cold water may be given, occasionally, to wet the mouth and throat.

The room should be kept quiet, and but few persons allowed to remain in it at a time, as their breath will render the air impure. It should be ventilated, but the light must not be allowed to fall on the patient's eyes.

If the medicine is slow in operating, injections should be used.

If the feet become cold, mustard plasters should be applied to them, and when the skin is dry and parched, the warm bath should be used; but if the patient is weak, the bath should be used by sponging the skin with warm water, mixed with an equal quantity of cold vinegar. The mouth should be well cleansed.

When the patient begins to recover, the appetite will be voracious, and great care will be necessary to prevent a relapse; the diet should be gradually and cautiously increased.

The bowels must be kept open; for which, nothing, perhaps, will be better than,

*Recipe*: Calcined Magnesia, one drachm.  
Cream Tartar, one drachm.

Mix. Divide into four powders, and give one or two a day, in sweetened water.

As soon as the child is able to be taken out, a ride in a carriage, or on horseback, will be of great service to it; but care should be taken not to expose it to the heat of the sun, or too great fatigue.

## DROPSY OF THE ABDOMEN.

Dropsy of the abdomen is not an uncommon disease among children, and is always the sequel of inflammation of the peritoneum, or lining of the cavity of the abdomen. This inflammation may be produced by various causes, such as improper substances taken into the stomach, and producing inflammation of the mucous membrane of the bowels, which inflammation may be communicated to their outer or peritoneal coat, and thence to the peritoneum proper. On the subsidence of this inflammation, effusion may take place, and before the mother is aware of it, the child's abdomen is filled with water. This is, perhaps, the most frequent cause of dropsy in children.

There are various other causes, however, that will produce this disease, such as blows or bruises on the abdomen; inflammation of the more solid parts of the abdominal viscera, as the liver, spleen, kidneys, &c.; repelled cutaneous eruptions, such as measles, scarlet fever, itch, &c. A habit of protracted costiveness may also lay the foundation of dropsy.

The first symptoms of this disease are sometimes so very obscure, that physicians, as well as mothers, may be mistaken in its true character. In many cases, nothing more than slight pains are felt in the region of the abdomen, and these are often referred to the presence of worms, or colic, when some slight aperients are given, and the child gets better, for a short time. But the symptoms return. The abdomen should now be examined; and if, on pressure, a soreness is felt about the region of the navel, or a sore lump should be discovered on the right or left side, we should suspect inflammation. In the first instance, it will be seated in the peritoneum, or lining of the belly; in the second, it will be in the liver; and in the third, it will be in the spleen. In either of these cases, the child will have fever; the pulse will be small, quick, and hard; the tongue will be coated with a white fur, and the bowels will be in a costive state.

If these symptoms are neglected, a dropsy of the abdomen will probably ensue. The face will be pale, and the whole surface of

the body sallow; the countenance will be expressive of discontent and suffering; the child will be weak and fretful; the appetite variable; the heat of the surface, however, not much above the natural temperature, except in the evening, when it will become warm and dry.

Dropsy, however, does not always commence and proceed so mildly. "In some cases, the pain in the abdomen is constant, severe, and much increased by external pressure; is attended with vomiting, a hot skin, a quick, firm, and contracted pulse, and great muscular debility." These symptoms may continue from five to twenty days, before effusion begins to take place; but when it does take place, the abdomen enlarges, and, by placing one hand on the side of it, and striking the other side gently with the other hand, the fluctuation of the water may be plainly felt. The abdomen now enlarges more or less rapidly; the child falls off in flesh, and the extremities become very much emaciated; the cheeks fall in; swelling takes place between the eyes, producing great change in the features; the appetite may continue good, or it may fail; the child becomes so weak that it cannot bear its weight on its feet, and it frets all the time when awake.

The bowels now become variable, being sometimes too loose and sometimes bound. There is, also, a constant low fever. The child continues to lose flesh, and the abdomen to enlarge, till, unless proper remedies be applied, death closes the scene.

**TREATMENT.**—In the inflammatory stage of this disease, our remedies are, bleeding, counter irritants, and low diet. If the soreness should be great in any part of the abdomen, and the pulse quick, hard and resisting, bleeding from the arm should be resorted to, in such quantity as the strength of the patient will bear. This should be followed by,

*Recipe:* Calomel, twelve grains.  
Ipecac., two grains.

**Mix.** Divide into four powders, and give one every two hours, till they operate well. Should they fail to operate, and the skin be hot and dry, use the warm bath, and give a dose of castor-oil.

If the symptoms are not abated, but the pain and soreness continue, after the operation of the medicine, cups or leeches should be applied to the abdomen, and as much blood drawn as the child can bear to lose. The bowels must be kept open with the

above powders and oil; in addition to which, the following mixture may be given :

*Recipe* : Venice Turpentine, two drachms.  
Spts. Nitre, two drachms.

Mix, and give, to a child two years old, fifteen drops every two hours, in slippery-elm or flax-seed tea. A few days' perseverance in the above remedies will generally perform a cure.

*Dr. Eberle* recommends, after bleeding, the application of a large blister plaster over the abdomen, and that the blister should be dressed with mercurial ointment. We acknowledge the remedy to be a good one; but when the diseases of children can be cured without blistering, we think it should be done.

Should effusion take place, and the abdomen feel sore to the touch, "leeches may be applied to advantage." Drs. Laenec and Velpeau speak in the highest terms of mercurial ointment, rubbed on the abdomen. *Dr. Eberle*, also, speaks highly of its use, and says, "My own experience has furnished me with unequivocal evidence of its usefulness."

In this form of the disease, the bowels must be kept open with mild purgatives, such as :

*Recipe* : Cream Tartar, one ounce.  
Salts Nitre, ten grains.  
Pulv. Rhubarb, twenty grains.

Mix. Divide into five powders, and give one every four or six hours, in parsley tea, or a tea made of the roots of horseradish.

*Wolff* recommends small portions of *calomel* and *digitalis* to be given repeatedly :

*Recipe* : Calomel, six grains.  
Pulv. Digitalis, two grains.

Mix. Divide into twelve papers. One of these may be given three or four times a day; and, in the more advanced stage of the disease, he recommends that the digitalis be combined with the cream of tartar, in small doses.

For many years we have not failed to cure the dropsy of infants, where the liver or spleen is not affected, by the following simple remedy : keep the bowels open with *rhubarb*, *castor-oil*, or *Glauber's salts*. For the purpose of removing the water, we give one *honey-bee*, three times a day. The bee must be dried, and pulverized as fine as possible, and given in a little sweetened water. One bee is a dose for a child two years old. This passes the water by urine, and not stool; and, after the



second or third day, we have known the water to flow constantly, in a slow stream, till it had all passed off. We then give the following tonic :

*Recipe* : Tincture Iron, half ounce.

Give five drops three times a day, in water, till the tone and strength of the system are restored.

The diet, through every stage of this disease, should be light and easily digested.

Pure air is important, and moderate exercise during convalescence will be found very beneficial.

#### OF CONVULSIONS.

It may be said that convulsions are almost peculiar to infancy, since so many more causes exist in infantile age than in any other. The brain and nervous system of infants are so excitable that we should not be surprised to find them frequently attacked with convulsions; indeed, this constitutes an alarming proportion of the diseases of infants, especially when they are confined in large, badly-ventilated cities, crowded hospitals, or close, unhealthy rooms. Dr. *Clark*, of Dublin, says that, "Of seventeen thousand six hundred and fifty children born in the Dublin Lying-in Hospital annually, one sixth part die in the first year of their age; and of those who die, nineteen out of twenty perish of convulsions." In this number, more than two thousand seven hundred die of convulsions, in that institution, every year. This is, however, a greater proportion than we find in this country, or than, we presume, could be found in Ireland, except in the Dublin Lying-in Hospital. Still, this disease presents a formidable aspect in all countries and in all places.

The mind and body of an infant are not able to resist the various exciting causes to which they are incessantly subjected. "All children, however, are not equally disposed to convulsions." Mr. North observes, that "the children of parents who marry at too early, or too advanced an age, are more susceptible of convulsions than the progeny of those persons who marry in the prime of life;" and we can underwrite this as a truth, as far as our observation, in thirty years' practice, extends.

*Boerhaave* and *Larrey* believed that a disposition to convulsions might be handed down from parents to children.

*Dr. Eberle* says : "We often meet with families in which the recurrence of convulsions is almost a matter of course in all the

children, as they pass through the process of their first teething.' We have, however, on the other hand, seen families where convulsions never occurred, though all the usual exciting causes may, in their turn, visit them.

Convulsions in children are evidently more common in cities than in the country, and there are three reasons for this.

*First.* Imprudent and premature marriages :

*Second.* The air is not so pure in a city as it is the country ; and,

*Third.* Children are more indulged in eating nuts, fruits, candies, and all kinds of sweetmeats, in cities, than they are in the country, since the facilities for obtaining them are much greater in the one place than the other. Again ; their diet, in general, is not so plain and wholesome as in the country.

An eminent writer says : "The children of mothers endowed with a very susceptible physical and moral constitution, with a quick and lively imagination, and great sensitiveness and mobility of temper, are, in general, peculiarly apt to suffer convulsive affections during the period of dentition."

Some persons think that children with large heads are very liable to convulsions. This may be so, if the child is not healthy ; otherwise, we believe the size of its head will make no difference, although, if it should be rickety, it will be more liable to them. But *Mr. North* says, "It not unfrequently happens, where some children of the same parents are afflicted with rickets, that others, who are exempt from the disease, are, at a very early age, destroyed by convulsions."

Children that are predisposed to convulsions are easily frightened. They start up in their sleep, and cry out ; they are feverish and fretful ; are not long amused with their playthings ; the pupil of the eye is variable, expanding and contracting without the usual cause for such action being placed before them. In some cases, the pupil will dilate and contract in the same strength of light ; in others, the light will not affect both pupils alike, and one may dilate and the other contract. This is, however, the case when the brain is affected, and not when the cause of the convulsions is in the stomach and bowels.

*Dr. Goode* says : "Children who are strongly disposed to convulsions are apt, when asleep, to lie with their limbs almost rigidly extended, the thumbs and great toes turned inwards.

A child's features, when predisposed to convulsions, change frequently, — a pale, languid appearance, being often changed for

a flush, and an animated look. It frequently sighs, and breathes short and interruptedly; the fingers are apt to be either in quick motion, or firmly clenched in the hand; or the thumb may be placed on the palm, while the fingers are extended and spread apart.

In convulsions, the countenance is always more or less distorted. "In some instances, the different parts of the body are successively affected." When the whole system is convulsed, there is a foaming at the mouth; the tongue is protruded; the eyeballs are distorted and spasmodically affected; they twist and jerk; the breathing is difficult; the face and scalp are red, and, at times, flushed or purple; and at other times, they look pale. When this is the case,—that is, when the face is flushed,—the brain is apt to be deeply implicated, and the child may die in the fit.

It is a remarkable fact, noticed by our best writers, that simple convulsions rarely occur at night, while the child is sleeping; and herein they differ from epilepsy, which, almost always, in the beginning, attacks the child while sleeping.

The causes of convulsions are various. Anything that may cause a strong determination of blood to the head, or produce a nervous irritation of that organ, or anything that would produce *apoplexy* in an adult, will produce *convulsions* in a child. "In infants, the paroxysm of an ague is very often ushered in by a convulsion." This may occur from day to day, if the cause be not understood.

In some cases, the cause may be local irritation, as teething, or crude, indigestible substances in the stomach.

When the convulsion is attended with a flushed face, a quick, hard, full pulse, a dry, hot skin, followed by stupor, the cause is an excess of blood thrown upon the brain. But when the face is pale, the pupils of the eyes contracted, the skin cool or of the natural temperature, the pulse small, frequent, quick, and irregular, the cause is to be sought for in the bowels or stomach. It may be worms.

Errors in diet, both in quantity and quality, are by far the greatest sources of convulsions in children. So long as nurses and mothers believe that children ought to eat a little of anything the parents eat, and so long as they believe the child will thrive in proportion to the quantity it eats, so long will children be liable to convulsions. How often are they brought on by indulg-

ing children in eating nuts and raisins, and other indigestible substances, in convalescence!

We will give a plain symptom, that may warn parents, in this condition of the child,—that is, when it has been reduced by sickness of any kind, is recovering, and is indulged in eating too much, especially of indigestible food, its bowels being neglected, and costiveness ensuing; in a few days, the skin at the root of the nose will begin to swell, and the swelling will extend around the eyes, the child becoming fretful; it will shortly be attacked with stupor, which will terminate in convulsions. Many cases of convulsions are referred to teething, when they owe their cause to improper diet and a neglect of the condition of the bowels. *Dr. Eberle* relates a case, where a child who had been several weeks troubled by painful teething, while amusing itself with its playthings, “was suddenly seized with a violent paroxysm of convulsions. In a few minutes, it threw from its stomach a large quantity of fluid, containing a mixture of almonds, raisins, and sponge-cake.” Where is the physician who has practised in a town or city, for a few years, who has not witnessed many such cases? An emetic, in such cases, will generally dislodge the offending load.

Repelled eruptions, such as the *itch*, *measles*, *scarlet fever* running sores behind the ears, &c., form another cause of convulsions.

Convulsions may be the result of *moral causes*, as sudden and violent *alarm*. *Mr. North* relates a case, where the nurse threatened to throw the child out at the window if it did not cease crying. This threat so frightened the child, that it was immediately convulsed in so violent a manner as to cause immediate death. *Dr. Eberle* relates a case which he saw, where the child was thrown into convulsions by its sister suddenly appearing in a mask before it.

*Hufeland*, in his journal, relates a case, where a woman, immediately after a rage of passion, gave suck to her child, which was perfectly well at the time, but which, in a few minutes afterwards, was in convulsions. *Mr. Gillibert* relates a case of a child that died of convulsions, immediately after sucking its mother, who had been a long time exposed to hard labor under a very hot sun.

*Boerhaave* gives two cases of convulsions in children, “which were, in the first place, excited by being nursed immediately after the nurse had been under the influence of violent passion.”

And we might collect, from authors, many more cases of a similar kind.

Taking into consideration all the facts on this subject, we are decidedly of opinion, that it is dangerous for a woman of an impetuous and ungovernable disposition to suckle a child; for, should she be in a violent passion when she gives it the breast, its life may be endangered thereby.

Our prospect for a cure, in this disease, depends very much on the exciting cause. If the primary irritation is located in the stomach and bowels, or should arise from irritation of the gums from teething, the danger will be less, and the cure more certain, than if the primary cause or irritation be located in the brain or spinal marrow. Though the danger is less when the convulsions are sympathetic, yet the case may terminate fatally by the shock and structural lesion which the brain may receive from the violent determination of blood which in some instances takes place "in that organ." This is more apt to be the result when the child is fleshy and full of blood, especially if the convulsion continues a long time. If, however, it be light, and of short duration, and the child soon returns to its playful and cheerful attentions to surrounding objects, the danger is not so great.

When strong symptoms of determination of blood to the brain exist, and the fit has lasted long, great danger may be apprehended. Indeed, these are the fatal symptoms in convulsions. In such cases, the face becomes dark, a fulness of the veins of the neck and head, and a heaving and moving sound in the breathing is observed; and, "in such cases, the little patient dies in a state nearly allied to apoplexy in adults."

Dissection has shown, in very many cases, that the brain was engorged with blood, in some instances blood-vessels having been ruptured, and blood effused; and in almost every instance, more or less serum has been found in the ventricles of the brain.

"When palsy and squinting occur, the most serious cerebral lesion may be inferred." In this case, the hope of a recovery is greatly lessened.

The longer the child has been sick or indisposed before the convulsion comes on, the greater is the danger to be apprehended. If the child has manifested "great fretfulness, starting from sleep, grinding the teeth, occasional flushes on one cheek, a variable appetite, a deranged state of the bowels," &c. &c., we may expect the seat of the disease to be deeply laid.

**TREATMENT.**—There are many who doubt the propriety of



using any remedy when the convulsion is on ; and, as a general rule, we can do but little at the moment. The use of external remedies may, however, lessen the violence of the paroxysms and shorten their duration, and in this way aid very much the curative process. If the child be suddenly attacked with convulsions, and the gums can be examined, this should be done, and every gum that is much swollen be freely cut down to the approaching teeth. The child may then be placed in a warm bath, and kept there for ten minutes ; and, immediately on taking it out, an injection of salt and water may be given. This will generally produce one or two free evacuations from the bowels, after which, the child will generally be enabled to swallow medicines.

From all the information which you can obtain as to the cause of the convulsion, you form your opinion, and prescribe accordingly. If it be from something the child has eaten, by which the stomach or bowels have become overloaded, you will immediately give it an active dose of medicine ; and we have found that medicines which are calculated both to puke and purge have the best effect in these cases.

*Recipe :* Calomel, twelve grains.  
Scammony, ten grains.

Mix. Divide into two powders, and give them half an hour apart. Should it not purge freely, in two hours, give,

*Recipe :* Castor-Oil, three drachms.

Mix in sweetened water and vinegar ; give it all for a dose. Should the oil fail to operate, in due time, an injection of salt and gruel must be given.

In the above cases, these medicines will generally perform the cure. But there are many cases where the irritation is seated in the brain or spinal marrow, either directly or from sympathy ; the child having received an injury on the head, or spine, or a disease of the stomach and bowels having existed for some days, till, by sympathy, the brain has become affected, and inflammation taken place, with or without effusion, in the ventricles. In this case, the child should be bled from the arm as freely as its strength will bear, and this should be followed by an injection of gruel, with spirits of turpentine, in the proportion of two table spoonfuls to half a pint of gruel. Should the turpentine not be at hand, a large quantity of salt, in warm water, should be used.

As soon as the convulsion subsides, the following medicine must be given:

*Recipe:* Calomel, fifteen grains.  
Scammony, ten grains.

Mix. Divide into three powders, and give one every two hours, in simple sirup, till they operate freely. The bowels should then be kept open with the following:

*Recipe:* Calomel, twelve grains.  
Rhubarb, twelve grains.

Mix. Divide into four powders, and give one every four hours. If they should not act freely, after each third dose, give a tea spoonful of castor-oil; or a portion of senna tea may be given occasionally, to work off the powders.

Where the determination to the brain is strong, the face flushed or pale,—for these extremes are produced by the same cause,—there is engorgement or effusion of the brain, and external remedies should be used. If the pulse is full or hard, quick and resisting, and the pupil of the eye small, bleeding from the arm must be again resorted to. But if the pulse is soft, and the pupil of the eye large, leeches should be applied behind the ears, and to the temples, three or four in each place. Let them draw freely, and continue the bleeding from the bites, by bathing them in warm water. When it is necessary to stop the bleeding, a little dry lint, or raw cotton, may be applied to the bites, or they may be greased with hog's lard.

The feet and legs should be bathed in water as warm as can be borne without scalding; after which, mustard plasters should be applied to the wrists and ankles, and, at the same time, the coldest water that can be had should be applied to the head, even while in the bath. Ice is better than water, if it can be obtained. These remedies will frequently moderate the symptoms immediately, and bring the disease to a favorable issue. Should the face become pale, and the pulse intermittent, during the application of the ice to the head, it should be removed, and a dry cloth applied in its stead for half an hour; but as soon as signs of irritation return, the ice is to be reäpplied, "even to the third or fourth time," till its good effects shall be decisive and manifest, in the suppression of all convulsions.

The French and German physicians frequently immerse the whole body in warm water, and, at the same time, apply ice to the top of the head.

*Dr. Currie* is a strong advocate of the application of cold

water to the head, "in all forms of convulsions of children." And when the countenance is flushed, the surface warm, and the pulse full and active, there can be no doubt of the utility of this practice. We have witnessed its good effects so often, that we feel fully authorized to recommend it in the highest terms.

If the patient's head be raised, and the water poured on it from a pitcher, so as not to run down over the body, the good effect will be sooner manifested. But if the face be pale, the extremities cold, and the pulse small, cold effusions should not be used.

If convulsions have supervened, on the drying up of ulcerations behind the ears, small blisters should be laid on those parts, and allowed to draw well; and, if there have been ulcerations on the back of the neck or head, the blisters should be applied to these parts. We have seen good results from shaving the scalp, and applying a blister thereon.

*Dr. Clark* strongly advises "blistering the calves of the legs." Blisters should not be applied to the top of the head while any fulness of the vessels exists there, and this fulness will be manifested by a flush of the face. They should only be used when the face is pale and a little bloated.

Mustard plasters are of equal, if not superior efficacy, to blisters, when applied to the bottoms of the feet and calves of the legs, and they may be advantageously applied to the whole length of the spine. The following stimulating embrocation may be advantageously used to the spine:

*Recipe:* Spirits Turpentine, two drachms.  
Spirits Camphor, two drachms.  
Tinct. Cantharides, two drachms.  
Olive Oil, two drachms.  
Carbonate of Ammonia, one drachm.

Mix perfectly, and apply it freely every two hours. It will not blister; but it exercises a powerful influence on the spinal marrow, and so, by direct sympathy, produces a good effect upon the brain.

When the convulsions assume the character of tetanus, and the head is drawn backwards, leeches should be applied along the spine; or, if they cannot be had, cups may be used instead.

When worms are suspected to be the cause, or to bear any part in the production of convulsions, the following medicines may be given:

*Recipe:* Senna Leaves, half ounce.  
Carolina Pink, half ounce.

Mix these together; boil to a strong tea, and give a small portion, sweetened, every hour, till it operates freely on the bowels. This may be repeated the next day.

The bowels must be kept open with some of the above medicines.

The diet for children laboring under this disease must be of the lightest kind, such as rice-water, toast-water, green tea, barley-water, sago, arrow-root or gruel,—any of which may serve for diet and drink. The child, however, may take a little orange occasionally, or suck the juice of a sweet orange, which will put an agreeable taste in the mouth; but lemon acid should not be allowed under any circumstances, as it never fails to lock up the secretions of the liver, and thereby do much harm.

This course of dieting should be rigidly persevered in, till the patient is able to sit up and take moderate exercise; otherwise, a relapse may be expected, and the second attack will be worse than the first.

#### OF EPILEPSY.

Epilepsy is a disease of frequent occurrence in children. It may be mistaken for convulsions, but the following symptoms will generally enable us to distinguish between them without much difficulty.

In epilepsy, the child is deprived of its senses from the commencement to the termination of the fit; while, in simple convulsions, the exercise of the senses is suspended only during the most violent part of the fit, and a degree of consciousness is to be observed long before the paroxysm is entirely off. Epileptic convulsions almost always terminate in a deep stupor, from which the child cannot be aroused for some time. In many cases, it will sleep an hour or two before it awakes; and when it is aroused, or awakes from that stupor, it has a “fatuitous expression of countenance.” A stupid surprise seems to rest upon it, and some time elapses before its features assume their natural appearance. But this expression of the countenance is never observable in simple convulsions, unless the brain is heavily congested.

“The predisposition to epilepsy is sometimes hereditary;” and when this is the case, the disease is easily excited into action. *Boerhaave* mentions an instance, in which all the children of an epileptic father died of this disease. *Stahl* has related a similar

circumstance. *Tessot* says, he knew a remarkable instance of this kind. "An epileptic man had eight sons and three grandsons, all of whom became affected with this disease."

The exciting causes of epilepsy do not differ from those given in simple convulsions. Indeed, many cases of epilepsy grow out of simple convulsions, which by habit become confirmed, and so terminate in epilepsy. An epileptic attack may, however, come on without any previously known predisposing or exciting cause.

*Dr. Eberle* has summed up the causes of epilepsy as follows:

*First.* The immediate cause of the epileptic paroxysms, whatever its essential character may be, is always seated in the brain.

*Second.* In the majority of fatal cases, organic and other obvious affections of the brain, particularly of the back portion, or of the membranes, are found on dissection, and which, we may infer, contributed to the excitation of the epileptic paroxysms.

*Third.* The affection of the brain is, in some instances, primary, and the result of causes that act directly upon the brain. In others, probably in a majority of cases, it is secondary, depending on primary irritations located remotely from the brain.

*Fourth.* Immediately before the accession of the epileptic attack, it would seem that vascular turgescence takes place in the back portion of the brain; and the pressure thus created, in coöperation with the general predisposition to the disease, and the organic affection of the brain, where such disorder exists, is probably the exciting cause of the paroxysm. Epilepsy is like an enemy in ambush, frequently attacking suddenly and unexpectedly. In many cases, however, it gives a previous warning.

These are the most common premonitory symptoms: a dull, heavy pain, or a confused or distressed sensation in the head, with giddiness, and the appearance of sparks fluttering before the eyes; the veins of the head and neck become distended, and a buzzing noise is heard in the ears; palpitation of the heart, nervous tremors, an agitated and alarmed appearance of the countenance, starting during sleep, temporary spasmodic twitchings of some particular muscle, pains in the stomach, succeeded by nausea, and, at times, by vomiting, with a fretful or perverse feeling. A creeping sensation is sometimes felt in some part of the body; an epileptic aura, or tremor, beginning in some par-



ticular nerve, as the sciatic or femoral nerve, about the hip joint, or a rapid change of color and expression of countenance.

All of these premonitory symptoms are not to be expected in any one case, but a sufficient number will exist to give character to the disease.

Epilepsy, in its early stage, generally comes on when the child is sleeping. When the paroxysm comes on while the child is awake, it is frequently preceded by a scream, or some peculiar noise; the child suddenly falls down, and becomes violently convulsed. We have known cases where the patient would not fall in every attack, but would show a sudden twitching of the face on one side, and in one foot, turn around, and partially lose its senses, and, in a minute or two, vomit. We have known these symptoms to occur, in one boy, ten or twelve times in one day; and yet he had no fit that completely convulsed him, unless attacked while sleeping, in which case the convulsion would be violent. In this state, he lived to be middle-aged before he died. He described his symptoms by saying, that he felt a cold stream begin in his hip, run down to his foot, and then return. If it reached his head, he fell; but if it stopped before it reached his head, he did not fall, but whirled around like a top. We have, when a boy, seized and shaken him many times, to stop the fit; and this always had the desired effect, if done in time, or before the *aura epileptica* reached the head.

Perhaps there is nothing more frightfully violent than an epileptic fit. The convulsive action of the muscles, especially those of the face, is particularly alarming. They are drawn and distorted into every shape; the whole frame is violently agitated, and the eyelids are in constant motion; the eyes project, and are fixed, or turned upwards, so as to hide the black; the face sometimes looks pale, but most frequently "livid or red," and sometimes almost black; the veins of the head and neck are very full; the tongue is often protruded beyond the teeth, and sometimes badly bitten. The jaws contract, and the teeth grind with great power; "sometimes the mouth is clenched tightly;" the hands are clenched, with the thumbs tight upon the palms; the head is thrown about in various directions, but sometimes it becomes fixed in one position; and, while this is the case, every effort to move it will prove ineffectual. The body may also be fixed firmly in one position, but it is mostly thrown into various attitudes. Sometimes the stomach and abdomen are violently drawn back to the spine; at other times, they are raised upwards,

and the spine is bent accordingly. The breathing is always difficult; the saliva is frequently thrown from the mouth, but sometimes it only works out in lumps on the lips, which are contracted, and pale or blue. The spasms seem, at times, to yield for a moment, and then return with increased strength. If the spasms do abate a little, no return of consciousness is observable, but a vacant, unconscious stare of the eye, which is soon interrupted by a returning spasm. One side of the body is generally more affected than the other. "In very violent cases, the urine and fæces are discharged involuntarily." The convulsion ceases, sooner or later, sometimes suddenly, but more frequently gradually.

The pulse, which, during the fit, was small, frequent, and irregular, now becomes full and regular; the countenance becomes more composed, and the child falls into a deep sleep, or stupor, from which he awakes in a state of confusion, or torpor of mind, "which generally continues for ten or twelve hours."

The patient generally sweats profusely while sleeping, especially about the head and neck. The perspiration, in many cases, has a peculiar and offensive smell.

All cases of epilepsy, however, are not as violent as in the description above given.

After the attacks are confined to the sleeping state of the patient, for a longer or shorter time, they begin to make their appearance in the day time. In some cases, the paroxysms occur only once in a month; in others, more frequently, till they come on every day, or several times in twenty-four hours; and the younger the child, the lighter is the disease, generally.

In some cases the fits appear at regular periods; but in a majority of cases this regularity does not obtain.

"One of the most distressing circumstances connected with this disease is its tendency to impair the understanding, to produce hebetude, and finally even total aberration of the mental faculties." The time at which this imbecility is effected, varies very much in different individuals, and this, perhaps, is owing to the peculiar part of the brain, or its membranes, affected, or the primary seat of the disease.

But, in all cases, if the disease continues for a long time, the mind becomes more or less affected.

"Epilepsy seldom proves fatal, except through the intervention of apoplexy." And though it may be suspended, and seem

to be cured, for months together, yet there is great danger of its returning. *Dr. Eberle* says, he "has seen instances where the disease returned, after a suspension of its attacks for several years."

If the primary seat of the disease is in the brain, all attempts to effect a radical cure will be in vain. But where the epileptic fits are produced by a sympathetic effect on the nervous system, having their origin in the stomach or bowels, then the disease, by early and proper treatment, may be cured. But even in these cases, if the disease continue long enough to impair the mental faculties, a cure is rarely, if ever, performed. *Richter* observes, "that a long continuance of sleep or stupor, and confusion of mind, after the subsidence of the paroxysm, is a very unfavorable sign."

Epilepsy from moral causes, such as terror, is generally extremely obstinate in its course.—*Lahn*. And it is said, also, "that those cases which come on at night, during sleep, are, in general, much more intractable than such as occur during the day, and are preceded by premonitory symptoms,"—*Richter*.

Men of great experience and observation have declared that "this disease occasionally occurs on a change of climate;" and this may be the case at the age of puberty, even where the disease has not been of protracted duration.—*Lontin*.

Hereditary epilepsy is perhaps always incurable.

*Wensel*, *Roederer* and *Esquirol*, all declare that, on dissection, the brain and spinal marrow have exhibited, more or less, unequivocal signs of disease, and ever showed decidedly that epilepsy had its seat in these organs; that if its first and primary link was not seated there, the secondary effect had become so deep and lasting that the brain and spinal marrow ultimately became its seat.

**TREATMENT.**—The causes of epilepsy are so various, and it is so difficult at all times to ascertain the exciting cause, that it becomes difficult to make a prescription to suit the case. Medical treatment, in such cases, therefore, is not so precise and scientific as it is in many other forms of disease.

The first thing to be done is, to inquire closely and particularly into all the previous symptoms; the time and manner of attack; how long the fits last; how long the patient has been subject to them; the age and habits of the patient; the hereditary predisposition, if any; whether the attacks are by day or by night; whether the patient sleeps long and sound after a fit; and

whether, when he awakes, he looks rational or wild, and is incoherent for a time; and whether he pukes before or after the fit. If he is old enough to tell, he should be asked whether he feels anything like an epileptic aura before the fit comes on? If he does, in what part of the body? How long it lasts? and if a fit always succeeds the *aura*?

These things having been correctly ascertained, a prescription may be more certainly made with a hope of success. If the veins in the neck are full, the face flushed, and the head giddy, bleeding in time may prevent the fit.

If the stomach has been overloaded, a brisk emetic may relieve the case for the present.

*Recipe:* Ipecac., fifteen grains.  
Tartar, two grains.

Mix. Dissolve in six table spoonfuls of warm water. To a child, give two tea spoonfuls; and to a grown person, give two table spoonfuls; and repeat one spoonful, according to age, every fifteen minutes, till they operate freely.

*Richter* says, "Where the attack runs regularly, at stated times, it may be kept off by administering an emetic every day, just before the expected attack." But many eminent physicians doubt the propriety of the practice; and we believe that where there is a strong determination of blood to the brain, the emetic should be preceded by bleeding.

Where the fit is preceded by the *aura*—that is, a warm, tingling sensation passing from some part of the limb up to the head,—a ligature should be tied above the *aura*, and allowed to remain till it passes off. *Dr. Cullen* observes, that "a ligature upon the limb above the part from which the *aura* arises should in these cases be applied, both because the prevention of a fit breaks the habit of the disease, and because the frequent compression renders the nerves less fit to propagate the *aura*." An instance is related in the *London Medical and Physical Journal*, in which pressure in this way prevented the recurrence of the paroxysm. *Cooke*, *Brecktedt*, and *Michaelas*, relate similar success by the application of a ligature above the *aura*. We once knew a boy that was subject to the *aura epileptica*, which would last for eight or ten minutes before it would go off. This boy was subject to the *aura* for years before he had a fit.

It is, however, in the intervals of the attack that the most successful efforts are to be made for the cure of this disease.



The immediate danger attending an epileptic fit is from the rapid determination of blood to the brain, thereby injuring that organ, and terminating in apoplexy. It then becomes necessary, during the fit, to use such means as will prevent the brain receiving an injury by such rapid determinations of blood to it. And against this, bleeding is, perhaps, the best and only sure remedy. But should it not be convenient to draw blood, an injection of salt and water may be used, and the bowels freely evacuated; and this will invite the action of the blood from the brain. Cold water may be applied, at the same time, to the head, and hot water or mustard plasters to the feet. Everything that would in the least press the blood-vessels of the neck, and prevent a free action of blood to the heart, should be removed.

These remedies will not cure the disease, but they may prevent a fatal termination of the fit at the time. A radical cure is to be sought for, however, in the use of remedies between the paroxysms of attack.

If it be found, as before stated, that the bowels have been loaded with indigestible or unhealthy food, this should be removed as quickly as possible; and, for this purpose, a brisk cathartic should be given.

*Recipe:* Calomel, twelve grains.  
Pulv. Jalap, fifteen grains.

Mix. Divide into three powders, for a child three years old, and give one every two hours, till they operate freely; if the child should puke, it will do no harm. Everything cold or salt must be avoided, till this medicine is done operating.

At times, the fit occurs once or twice a month; and, in such cases, *Dr. Richter* says he has succeeded in performing a complete cure by giving an emetic of ipecac. and calomel, which he repeated every third day, for six weeks. It may be given in the following manner:

*Recipe:* Calomel, ten grains.  
Ipecac., five grains.

Mix. Give in sirup; work it off with gruel without salt. This is a dose for a child five years old.

When the disease is attended with acid on the stomach, it may be cured by adding an alkali to a tonic. The famous powder of Margrave, the celebrated German remedy, is the following:

*Recipe:* Powdered Mistletoe, one ounce.  
Carbonate Magnesia, half ounce.  
White Sugar, one ounce.



Mix them well together, and give a child five years old or under, a tea spoonful two or three times a day.

When the child vomits after the fit, or the upper lip trembles much, it is thought by some eminent writers that the stomach is the seat of the disease; or, at least, that there is some offensive matter there. *Van Swieten* states, "that in a case of epilepsy in a child, in which the paroxysms were invariably preceded by the tremulous motion of the *under lip*, he employed emetics and purgatives with entire success."

Should there be any suspicion of the existence of worms in the bowels, suitable remedies for their removal should be used.— (*See chapter on worms.*) Every physician of extensive practice has seen a greater or less number of cases of epilepsy in children produced by worms, which were cured by their removal.

Of late years, the physicians of Europe have succeeded in curing epilepsy with the following medicine:

*Recipe:* Pulv. Valerian Root, two drachms.  
Elutriated Oxide of Tin, half drachm.

Mix into eight powders, for a child from three to six years old, and give one, in sirup, three times a day. The dose should be increased, according to age. When the elutriated oxide of tin cannot be had, the following may be substituted for it:

*Recipe:* Pulv. Valerian Root, two drachms.  
Oxide of Zinc, twenty grains.

Mix. Divide into eight powders, and give as above directed.

When the disease succeeds to drying up of sores behind the ears, on the back of the neck, or any other part of the body, the obvious remedy is, to restore the discharge, by applying blisters, or setons, or tartar emetic ointment, to the old sores, and thus produce a fresh running sore. And, in this case, the following medicine should be used, in addition to the foregoing:

*Recipe:* Pulv. Gum Camphor, ten grains.  
Pulv. Musk, five grains.

Mix. Divide into five powders, and give one, in sirup, two or three times a day. The bowels should be kept open with some gentle purgative, such as castor-oil or rhubarb. The author has cured many cases of epilepsy in children, when the disease had its seat, apparently, in the stomach and bowels.

*Recipe:* Cream Tartar, one drachm.  
Pulv. Jalap, half drachm.

Mix. Divide into ten powders, for a child three years old, and give one powder every night, at bedtime, in sweetened water. This will operate two or three times the next day. The following powders should be given in the daytime.

*Recipe* : Pulv. Nitrate of Silver, six grains.  
Pulv. Russian Castor, twelve grains.  
White Sugar, one drachm.

Mix in twenty-four powders. Give one three times a day, in sirup, and increase or diminish the dose, according to the age of the child.

The oxide of zinc has been used successfully by many eminent physicians. This medicine should be given in small doses at first, and gradually increased, always keeping up to the quantity the stomach will bear without puking.

*Recipe* : Oxide Zinc, ten grains.  
White Sugar, one drachm.

Mix. Divide into ten powders, and give one three times a day, in a few drops of water. If the child pukes, give less. *Lettoom, Cullen, Ideler* and others, speak highly of this remedy. We have found this most beneficial where the disease continued to return from habit, after the exciting cause had been removed.

The ammoniated copper was a favorite remedy with *Dr. Cullen*. It should be given in small doses.

*Recipe* : Cruprum Ammoniac, five grains.  
White Sugar, thirty grains.

Mix. Divide into twenty powders, and give one three times a day, in thick sirup. Increase or diminish the dose, as the stomach will bear without puking. We have no doubt that the disease has been cured by this remedy in some instances.

Mercury given to salivation has also cured this disease; but any other remedy should be preferred to salivation in children.

We have several times cured adults of epilepsy with Spanish Flote indigo. It is used in the following manner :

*Recipe* : Spanish Flote Indigo, one ounce.  
Pulv. Cloves, one drachm.

Mix. Divide into twelve powders, one of which may be given, morning and evening, in sweetened water; if they purge too much, give only one a day. This remedy, however, will not cure every species of the disease.

Whatever remedy is chosen for the cure of epilepsy should be

steadily persevered in for a long time. It generally takes from three to nine months to cure the disease by medicine.

When a portion of the skull has been beaten down on the brain, or a fracture produced on the interior table of the skull, from which a spicula of bone has grown and penetrated the substance of the brain, causing constant irritation, an operation by trepanning the skull, and removing the spicula, has cured the disease. Among the number of physicians and surgeons who have performed this operation successfully, are *Boerhaave*, *Thenier*, *Stalport*, *Vanderweil*, *Tissot*, *Massie*, *Dudley*, of Lexington, Ky., *Roger*, of New York, and *Guild*, of Alabama. We mention these names in justice to these gentlemen; and when all medical assistance fails, the patient may still have hope in surgical aid.

It would be next to impossible to name everything that has been and can be done for the cure of epilepsy, as our resources are almost inexhaustible; and yet, in some cases, all remedies fail; not, perhaps, for the want of a proper remedy, but because we have failed to adapt it suitably to the case.

The *peony* or *piony* root, as it is generally called, has cured epilepsy. The iris, a species of flag, has also cured it, and many simple remedies have had their advocates, not because they were more powerful or more scientifically selected than others, but because they happened to suit the case, and the condition of the patient at the time they were given. Suffice it to say, in all cases, the most rigid adherence to a light and easily-digested diet is absolutely necessary in order to obtain a cure. Parents are too apt to become weary, and relax their attentions to the use of the medicines, as well as to the diet and exercise of the child.

The dieting should be kept up for six months after the last fit occurs, and every facility for pure air and healthy exercise afforded. All exciting causes should be put as far out of the way as possible, and the patient placed where it cannot be brought under their influence.

#### OF SPASMS OF THE FEET AND HANDS.

This disease is denominated by *Eberle* and others, *carpopedal spasms*. The authors who have written most clearly on it are, *John Clark*, of Dublin, *Kellie*, *Jas. Johnson*, *North*, and *Eberle*.

This disease usually makes its appearance in a gradual manner. From the third to the sixth month is the most usual age in

which it appears, though it occurs as late as eighteen or twenty months after birth. At first, the symptoms are so slight as scarcely to attract attention; a hurried breathing, not unlike that in croup, is perceived at the moment the child awakes from sleep, when it is apt to start as though it were frightened. From this time, its features undergo a perceptible change, and the countenance assumes an anxious appearance; "the sides of the nose are drawn in;" the child is apt to frown; and, when it takes the breast, it sucks greedily for a minute or two, then lets go, and throws back its head with great violence.

In the progress of the disease, the bowels become constipated, and these symptoms continue to manifest themselves for a longer or shorter time, before the disease fully develops itself. The bowels are more or less deranged; the fæces thin, light colored, and sometimes very fetid; presently the thumb will be clenched in the palm of the hand, and the toes drawn towards the bottom of the foot; the foot turned inwards; and sometimes the ankles and wrists swell, and change their natural color for a purple hue. "The head is often thrown backwards;" and the neck is stiffened, when the breathing becomes constantly difficult. "Each inspiration is now attended by a croupy sound;" "the heart palpitates violently;" the child rarely cries in a natural manner, but sobs frequently. The breathing sometimes appears to be suspended, and the child looks pale or faint; but "sometimes the face is dark." The vessels of the head and face are filled, and the face is flushed as in apoplexy.

The patient is now, every moment, liable to convulsions. These may be partial, as in the extremities; or they may be general, involving the whole body. In a child in whom the convulsions were very prominent and severe, the head and heels were the only parts that touched the bed for many days; and if with difficulty this painful position was altered by the mother, it was quickly resumed. — *Eberle*.

In general, but very little febrile action can be detected. "Sometimes the locked state of the thumb, the rigidly bent position of the head and feet, and croupy breathing, will continue several weeks, with but little intermission, except for a few minutes at a time." Sometimes the child will suddenly arouse from this state of spasmodic action, and present, for a few minutes, a cheerful countenance, and be disposed to play, or take notice of surrounding objects; but this is soon changed for another convulsive action of the extremities and spine.

These symptoms may, and do, vary, in many cases; but we have given enough to show the mother the character of the disease.

There are various opinions as to the cause and seat of this disease. Some physicians think it originates from a deranged state of the bowels; others, that it has its seat, primarily, in the brain; and others, again, think that teething is the exciting cause. The bowels are, no doubt, deranged in the commencement of the disease, and teething may act as an irritant, and the brain may become affected secondarily. But we are of the opinion that this disease has its seat in the spinal marrow. The peculiar spasmodic action of the hands and feet, and the curvature of the spine backwards, all go to show that the spinal marrow, and the nerves having their origin from it, are the seat of this disease.

Some authors speak lightly of it, and say it rarely proves fatal. We are, however, of a different opinion. So far as our observation, and the experience of the physicians of this country whom we have consulted on this subject, extend, it is a disease of great danger to the infant.

**TREATMENT.**—In this, as well as all other diseases of infants, every irritating cause should be removed; the first thing, therefore, to be attended to is, to examine the gums; and, if swollen, they should be freely cut down to the teeth. If the teeth be large, cut from the corner of each tooth, till the gum lancet touches the tooth all the way; otherwise, no benefit will be gained from the lancing.

If the pulse be full or hard, the child should be bled freely from the arm, and the bowels should be actively purged,—very light, mild purgatives will do little or no good in this disease. To a child six months old, give the following, and increase or diminish, according to age:

*Recipe:* Calomel, twelve grains.  
Scammony, six grains.

**Mix.** Divide into six powders, and give one every two hours, till they operate freely; or you may give the calomel alone, in the same proportion. If it should not operate well, in two hours after the last is taken, give a dose of castor-oil.

After you have evacuated the bowels freely, if the pulse still keep full, leeches must be applied on the back, on each side of the processes of the spine, about an inch apart, nearly the whole length of the spine. If the hands are cramped more than the



feet, apply the leeches mostly between the shoulders; and if the feet are cramped most, then apply them lower down the back, and between the hips.

If leeches cannot be had, use cups of glass or little gourds; and if neither can be had, apply a blister plaster to the spine, nearly its whole length. But should there be strong prejudice against this practice, use the following liniment:

*Recipe:* Spts. Camphor, two drachms.  
Spts. Turpentine, two drachms.  
Tincture Cantharides, two drachms.  
Olive Oil, two drachms.  
Carbonate Ammonia, one drachm.

Mix perfectly, and rub it in freely, the whole length of the spine, repeating it every two hours. The bowels should be kept open with,

*Recipe:* Calomel, six grains.  
Ipecac., three grains.

Mix. Divide into six powders, and give one every two hours, so as to keep the bowels freely open. Placing the feet in warm water, and bathing the head in cold water at the same time, will always moderate the spasms. Blisters behind the ears, and mustard to the feet, have done good. When the disease begins to yield, and the spasms have all left the child, the bowels may be kept open with,

*Recipe:* Calcined Magnesia, half drachm.  
Cream Tartar, half drachm.

Mix. Divide into four powders, and give one morning and evening, in sweetened water.

If the child is at the breast, its mother's milk will be its best diet; and if weaned, its food should be of the lightest kind. Proper exercise, as soon as the child is able to take it, will be profitable.

#### OF SIMPLE CONTINUED FEVER.

This form of fever sometimes attacks children, though not so frequently as it does grown persons. But, as it occasionally occurs, it is proper that it should be noticed here.

Infants from the age of two to four years old are most apt to be attacked with this form of fever. It is rarely ushered in by a chill, but generally comes on after exposure, or active exercise in the heat of the sun; after which, the child is apt to fall asleep, and awakes with a fever. The face is generally flushed, the skin hot and dry, the tongue clean, and the pulse a little fuller

and quicker than in health; the child is apt to complain of pain in the forehead; in some cases, a slight delirium supervenes for several hours, when the child will fall asleep, and a profuse perspiration break out all over the body, and the fever subsides. The whole paroxysm may not last over twelve hours. The child will feel a little languid for a day or two, and all will be well again.

This form of fever is called by some writers *ephemeral fever*. But the child is not always so fortunate as to have so short a paroxysm. It sometimes lasts several days, without any intermission; the pain in the head becomes more intense, the tongue coated, the pulse full and strong, the abdomen hot, and the skin feels dry and burning; the bowels become constipated, and the delirium recurs. Stupor may come on, and the case present a dangerous aspect. When the child is aroused, it has great thirst, but no appetite. If neglected, the symptoms will increase in violence, and, in the course of from three to four days, death may ensue, and the child die with all the symptoms of cerebral irritation.

**TREATMENT.**—If the fever is very high, and the pulse full, with much pain in the head, especially if the whites of the eyes are red, the child should be bled from the arm. If the above symptoms are not severe, the bleeding may be omitted; but whether it is bled or not, the following medicine, for a child two years old, should be given:

*Recipe:* Senna Leaves, two drachms.  
Pulv. Rhubarb, twenty grains.

Simmer them in a gill of water fifteen minutes; strain and sweeten the tea, and give a table spoonful every half hour, till the bowels are freely purged; or,

*Recipe:* Calomel, six grains.  
Rhubarb, six grains.  
Salts Nitre, two grains.

Mix. Divide into three powders, and give one every two hours, till they operate freely. If the discharges are green or dark when the powders cease to operate, give the following:

*Recipe:* Castor-Oil, two drachms.  
Spts. Nitre, twenty drops.

Mix, and give in sweetened vinegar and water.

If the fever continues after the operation of the oil, give the following cooling powders.

*Recipe* : Cream Tartar, half drachm.  
 Salts Nitre, ten grains.  
 Tartar Emetic, half grain.

Mix. Divide into four powders, and give one every hour, in balm, hyssop, or sage tea, till the fever is cooled off; or,

*Recipe* : Spirits Nitre, half ounce.  
 Wine of Ipecac., one drachm.

Mix. Give fifteen drops, in some one of the above teas, and repeat every hour, till the fever subsides. When the fever is entirely removed, if the tongue is coated, you must repeat a dose of *castor-oil* or *rhubarb*.

If the fever return, repeat the above medicines, and continue, till it is entirely subdued.

In every case, the diet should be light and thin. When calomel is given, everything cold, salt or greasy, should be avoided, till the medicine is worked off.

When the child begins to recover, it should be kept in the shade for two or three days, or it will be liable to relapse. But in this, as in all other cases of fever of infants, as soon as the strength will admit of it, proper exercise on horseback, or in a carriage, will be beneficial.

#### OF MILIARY FEVER.

This form of fever takes its name from the resemblance of its eruption to a millet-seed. The color is first a transparent red, and afterwards milky. It is preceded by a pricking sensation; the patient sighs, feels great anxiety, and throws out a sour sweat.

This disease has been noticed by medical writers for at least one hundred and fifty years, during which time it has not changed its character or type. This, however, is characteristic of all the eruptive diseases.

Miliary fever is not contagious. It generally makes its appearance in hot weather, though we have seen it in the fall, winter, and spring.

It is sometimes mistaken, by careless observers, for scarlet fever, and sometimes for measles; but a little attention will satisfy any one that it is neither. The eruption is small, round and distinct; sometimes elevated above the surface, so as to be observed by the eye, and at other times it can only be detected by feeling, when the surface will be found to be rough. The top or point of the vesicle is clear, and contains a little fluid

When it dries away, the cuticle or grain of the skin peels off, in thin flakes, like fine bran.

The child is weak and fretful, sometimes showing signs of great debility. The bowels are apt to be relaxed, and, in young children, the discharges are fetid. The tongue has a white coat on it, especially towards the root, and the appetite fails. The eruption remains out for five or six days, and then falls off, or is succeeded by a second eruption, which runs its course as the former. When this is the case, the whole course of the disease will occupy about fifteen days. This disease is sometimes mistaken for prickly heat.

*Miliary fever* has prevailed in Europe, as an epidemic; but we have no such history of it in America, though every physician in this country has seen more or less of it, especially in the large cities, where the air is impure, in hot weather.

The principal European authors who have written on this disease are, *Plouquit, Gericke, Jucks, Linnæus, Parr, Boncroff, Stoll, Planchon, Triller* and *Goode*. In America, *Cullen*, and many others.

Various opinions are given by these authors relative to this disease; but let it have assumed what shape it may, at different times and at different places, in the old world, in America it has been very uniform in its character, and the above description will so fully embrace its symptoms that it will not be easily mistaken.

**TREATMENT.**—This is evidently a disease of more or less debility, especially in large cities, and, therefore, should be treated with a view to that fact. The bowels will generally be found, in warm weather, to be relaxed; the secretions are vitiated, and smell badly. The first thing, therefore, to be done, is to correct the secretions. This, for a child two years old, is most effectually done with,

*Recipe:* Calomel, three grains.  
Rhubarb, two grains.

**Mix.** Divide into three powders, and give one every three hours, in sirup, till they operate gently on the bowels. The surface may be bathed with tepid water, two or three times a day.

If the bowels are not much deranged, as is generally the case in cool weather, the calomel may be omitted, and the following medicine given :

*Recipe* : Pulv. Rhubarb, six grains.  
Calcined Magnesia, ten grains.

**Mix.** Divide into two papers, and give one every two hours, in sweetened water; or you may give the following:

*Recipe* : Senna Tea, two ounces.  
Manna, half ounce.

Dissolve the manna in the tea, and give a table spoonful every hour, till the bowels are freely opened; or,

*Recipe* : Castor-Oil, half ounce;

which may be given at two doses, two hours apart. As soon as the bowels are freely purged, and the discharges become healthy in appearance, the following tonic should be given:

*Recipe* : Huxham's Tincture, one ounce;

Give fifteen drops three times a day, in sweetened water, and increase or diminish, according to age. The bowels must be kept regular with some of the above gentle medicines.

After the bowels are properly cleansed, if the child be six or eight years old, very small doses of tartar emetic will be found of service in correcting the sour sweats. It is most conveniently given in the following form:

*Recipe* : Cream Tartar, twenty grains.  
Salts Nitre, six grains.  
Tartar Emetic, half grain.

**Mix.** Divide into six powders, and give one every two hours, in some herb tea, and continue, till the sweats are removed.

In all cases, the diet should be light and nourishing, and the child should not be covered too warm in summer. All flannel should be removed from the skin, and cotton or linen substituted in its place.

As soon as the child is able to bear it, riding out in the open air, in good weather, will be of great service.

#### OF SMALLPOX.

To give a full history of smallpox, its origin and progress in the world, would be to extend this chapter far beyond our present limits. We will merely remark, that smallpox has been known in the world ever since the ninth century. It was, however, first accurately described by the Jesuits. It prevailed, for an incalculable period, in China, before it entered Europe.

There are two forms of smallpox — the *distinct* and *confluent*. The *distinct* smallpox is characterized in its attack by the



following symptoms: A cold stage, which is followed by fever, frequent vomiting, and some degree of soreness in the throat; the flesh is sore, and the bones ache. From the third to the fifth day, the eruption begins to appear on the face, neck, and breast, in small specks, which multiply for four days, when there is usually a pretty full crop of them over the whole body.

They are more numerous on the face, neck, and arms, than any other part of the body; perhaps, in the proportion of "five to one." The head, face, and hands, and wherever else the eruption shows itself, gradually swell, the eyelids being frequently so swollen as to close the eyes entirely. The spaces between the pimples are reddish, "and continue to grow more so as the pimples become pustules," and matter forms in them. "The fever" does not intermit, but "is of the inflammatory kind." The pustules continue to increase in size, till the eighth or ninth day, when they become complete and full, and the matter found in them becomes yellow, and suppuration complete.

But before the pustules fill, the formation of the vesicle is peculiar, and unlike every other vesicle in eruptive fevers. The pustules are flat on the top, and seem, in color, as if they contained milk and water, while they are filling and coming up to their full size. When they are full, there is, in almost every one, a small depression, as though the point of a dull pin had been pressed upon it. This depression remains to the last, and leaves a small puncture in the centre of the scar. This is a characteristic sign of this disease; and where it is wanting, the disease is not smallpox, but some other form of eruptive fever.

*The confluent smallpox.*—This species commences with all the symptoms of the distinct smallpox, except that they are more violent, and the eruption begins to show itself sooner after the attack. As a general rule, the sooner the eruption appears, the more violent is the attack.

In the confluent smallpox, the whole surface is raised, especially on the face, neck, breast, arms and legs; the fever runs very high, and sometimes delirium attends, to an alarming degree. Indeed, in all cases where there is much delirium, the danger is great. The patient sometimes vomits everything that is taken into the stomach, and suffers from great thirst.

A day or two after the pustules have filled and become yellow, they begin to dry. The first appearance of this stage is the little dent in the middle of the pustules beginning to look brown, and this brownish appearance gradually spreads over the pustules,

when they begin to break, and emit a peculiar smell — the most loathsome, perhaps, of all others, and one that cannot be mistaken by any one who has ever smelled it before.

As the pustules begin to dry, the fever subsides a little, till it leaves the patient almost entirely for two or three days. At this time, the itch attending the pustules is most intolerable, and the patient, if not prevented, will scratch and tear the skin from the face, hands, and arms. Every mark of the nail leaves a deep scar, which heals in hard ridges or patches.

Sometimes a pustule will make its appearance in the eye, when it is almost sure to destroy the sight.

When the pustules have been drying for two or three days, a second fever arises, which is probably produced by the absorption of matter from the pustules. This fever is frequently more dangerous than the first.

If the patient die of smallpox, it is from one of two causes: first, because the pustules do not fill well; or, after they have commenced filling, they cease to do so, and turn brown. In some cases, the pustules never begin to fill, but the spots that were first red turn black in three or four days, and remain flat; in the event of which, delirium comes on, and the patient dies of all the symptoms of typhoid fever and congestion of the brain. In other cases, the fever runs so high that the patient is cut off in the first inflammatory stage, even though the pustules seem to be disposed to fill.

Again; the patient often sinks under the secondary fever. This, however, is generally for the want of proper management. When this is the case, the tongue becomes dark on the top, and the teeth are covered with a dark sordes. The pustules that have come out on the tongue and roof of the mouth and throat change their color from a red to a purple. Symptoms of congestion, or pressure on the brain, now make their appearance; a heavy stupor follows, and the patient dies in a comatose condition.

The length of time that smallpox runs, from the first symptoms to a final recovery, is, in *distinct smallpox*, from twelve to fifteen days, and in the *confluent* form, from eighteen to twenty-four days, or sometimes twenty-eight days, before all the sores are healed.

Smallpox is highly contagious, under all circumstances, from the time the fever first arises till the patient washes out. It may be kept for years in clothes, and then communicated to others

**TREATMENT.**—The smallpox is at all times to be dreaded, and looked upon as a formidable disease; but if the patient be well treated, it may be shorn of many of its terrors.

There is an almost insurmountable prejudice in the world against calomel; but we have now to combat a disease which cannot be successfully treated without it. That it has been cured, in a few instances, without calomel, we are ready to acknowledge; but those cases are rare, and are to be attributed more to the conservative powers of the system than the remedies used. If we have a specific in medicine, it is mercury in smallpox. We can say—what few physicians can, in the treatment of smallpox—that we have never lost a case, though we have treated a large number, counting all the varieties of distinct and confluent smallpox and varioloid. Our course of treatment has uniformly been, first, to give, for a child two years old, an active cathartic of calomel. The dose may be increased or diminished, according to age.

*Recipe:* Calomel, ten grains.  
Jalap, six grains.

Mix, and divide into three powders; give one every three hours, till they operate freely, and work them off with gruel without salt. On the second day, give the following medicine:

*Recipe:* Calomel, twelve grains.  
Salts Nitre, six grains.

Mix. Divide into six powders, and give one every two hours, in sirup. This should be repeated every day, till the eruption makes its appearance, when the calomel should be omitted, and the following purgative given:

*Recipe:* Pulv. Rhubarb, twelve grains.  
Calcined Magnesia, twenty grains.

Mix. Divide into four powders, and give one every four hours, in sirup or sweetened water, or just as often as will procure two operations daily. This should be repeated every day, till the pustules fill.

The drink should be warm balm or dittany tea.

When the pustules begin to dry, and the secondary fever comes on, the first or second prescription, according to the strength of the child, should be given. This should be repeated for two days, when the secondary fever will abate. The rhubarb and magnesia should be resumed, to keep the bowels open. If, however, any symptoms of stupor should come on, the rhubarb and magnesia should be omitted, and the calomel given again.

On the appearance of the eruption in the mouth, the saliva will begin to flow, and the stomach become nauseated. This spitting is not salivation, but the effect of the pustules breaking out in the mouth and throat; and the freer the saliva flows, the better for the patient.

In order to prevent the pustules from coming out in the eyes, they should be kept constantly wet with cold water, by means of a piece of fine linen.

The diet should be thin water-gruel, made of plain corn meal, without salt; but tea, sago, or arrow-root, may be given, for a change.

When the pustules are filling, a little weak chicken-water, with but little salt, and no grease on it, thickened by boiling rice in it, may be given once a day.

If the patient is disposed to scratch, his hands should be tied up in cotton; his face may be frequently wet with moderately cool water, to lessen the number of pustules. If the eruption is confluent, the sheets should be greased, to keep them from sticking to him, as the pustules break or fall off.

The room should be well ventilated with pure air; and as soon as the pustules are full, the patient's drink should be cold water, with a little cream of tartar in it. His bedclothing should be light in warm weather, and comfortable in winter. In bad cases, the thick skin on the palms of the hands and soles of the feet comes off.

When the scabs begin to fall off, they should be removed from the sheets twice a day, and the rawest places should be lightly touched with sweet oil every day. When the scabs have all fallen off, and the surface is pretty well healed, the patient should be washed from head to foot in warm water and soap; the hair should be trimmed short, and the head washed with soap and water, and combed with a fine-tooth comb, to remove all the scabs from it.

The nails frequently fall off the fingers and toes, in bad cases. The appetite becomes voracious in convalescence, and the patient, if permitted, will cause a relapse of the fever, by eating too strong food, or by eating too much of food that is proper.

It sometimes happens that the patient becomes very weak; to relieve which, we have prescribed camphor mixture, or the gum alone, in a pill, or some of the more diffusible stimulants, such as ammonia, hartshorn, &c., all of which we have always seen



do more harm than good. If, however, great debility should occur, a little wine and water may be given occasionally.

If the pustules should fail to fill, and the spots turn black, or dark brown, and look flat, all the stimulants that can be given will not fill them. The patient will die.

The pits are so deep, in many cases, especially on the face, that the features are very much disfigured. If the face has not been scratched, the pits may be taken off. This is done in the following manner: As soon as the scars are well, take the strong tincture of cantharides, and wet cotton with it; apply it on the face, bind it there, and let it remain till it draws a blister, when it must be removed and the skin clipped; let out the water, and dress the sore with simple cerate twice a day, till it heals. In this way, travel all over the face, till every pock has been raised. When the blisters have all healed, and the redness leaves the face, which will be in six or eight weeks, there will be no pits of the smallpox observable. This is a severe remedy; but those who prize their beauty very highly will bear the pain for the sake of the effect.

#### OF THE VARIOLOID.

This disease is so nearly allied to the smallpox that it has been considered by nearly if not all the writers who have treated of it, to be smallpox in a modified form, till *Dr. Thompson*, of Edinburgh, in 1818, wrote a letter to Sir James McGregor, Director General of the Army Medical Department, on the subject of the varioloid epidemic, which had, shortly before that time, prevailed in Edinburgh, and other parts of Scotland, with observations on the identity of chicken-pox with modified smallpox. In this work, he treats largely of the identity of these diseases, and brings some very striking cases to prove this position,—that where an epidemic disposition for these diseases prevailed at the same time, they often appeared in the same family, produced from the same cause, but, being in different subjects, assumed different characters, as in one child varioloid or modified smallpox, and in another child, in the same family, and at the same time, producing chicken-pox. He also gives some well-marked cases, in which measles and varioloid pervaded the system of the same person at the same time; and which show that whichever began to act first ran its course till the febrile symptoms began to subside, when the febrile stage of the other commenced; so



that before the eruption of the first had disappeared from the skin, the eruption of the second began to make its appearance, and each one continued to run its ordinary course, till it had passed through all its various stages. This fact has been proved by all writers on eruptive diseases since that time.

*Dr. Thompson* is of the opinion that the contagion of smallpox may produce the varioloid in those who have been vaccinated; and this the observation of all physicians will corroborate. But we would suggest this fact, — that all vaccinations are not genuine, any more than all cases of smallpox. If the vaccination be genuine, as we shall point out when we come to treat of that subject, the patient will never again be liable to take the genuine smallpox; and if he should take the varioloid, it will, in every instance, be in a very mild and modified form. With these remarks, we shall leave the subject of speculating on this disease, and proceed immediately to the characteristic symptoms and signs of varioloid.

This disease is certainly contagious; perhaps equally so with the smallpox, and no one doubts the contagious nature of that disease.

The varioloid commences, like smallpox, with a slight chill, soreness in the flesh and throat, headache, sickness at the stomach, and occasionally vomiting; the pulse is quickened, and the tongue is white on the top; which symptoms continue till the third, and sometimes till the fifth day, when, on the face, arms, and breast, you will discover fine red points, like specks of blood in the skin, which will continue to enlarge and rise up, till the surface becomes elevated. The pustule now begins to form, the base of which is red, but the top is lighter colored. It is generally circular, but, in some cases, some of them may be oblong or crescent-shaped, and occasionally, half-round, like a small pea when split. It does not rise up in a half-round, but is flattened on the top. A few of them may have a depression in the centre, but this mark is not characteristic of varioloid, as it is of smallpox, the varioloid pustules being generally flat on the top, with no depressed point in the centre.

The color of the pustules is at first whitish, as though they contained milk and water. The fever continues for three or four days, till all the pustules are full; the first that come out filling first, &c. When all are full, the fever begins to subside, and the pustules become yellower as they ripen. In a day or two more, they begin to dry and break, and the matter discharges; a scab

forms on the top; and, in a few days, it becomes loose, and falls off, leaving, at first, the appearance of a pit, which generally, however, entirely disappears in two or three months, except a few that have been very deep, or were scratched off before they dried. A secondary fever arises when the pustules begin to dry, which will subside in about two days.

If the case be neglected, or badly treated, and the pustules do not fill and come to maturity, the patient may die with this disease; but where the case is well treated, comparatively little danger may be expected.

There are well-attested cases of persons having the varioloid after having the smallpox, and after vaccination; but it occurs less frequently after vaccination than after smallpox. There is a certain susceptibility in the human system to all the eruptive forms of disease; and if this susceptibility be perfectly destroyed by having the disease once, it will most probably never be regenerated in the system; and if not, it is of course impossible to take the same disease a second time. But should this susceptibility not be destroyed, it may in time, like a latent spark, rekindle, and the person again be liable to the same disease. From this cause only can any person have the smallpox or varioloid the second time, or have either after being properly vaccinated.

**TREATMENT.**—The varioloid, like all other eruptive fevers, requires to be thrown upon the surface, which is its natural place, where it should be kept till it runs its natural course. The violence of the disease depends very much on the condition of the system at the time of the attack, and the management of the case during its progress. The first thing, therefore, to be done, is to cleanse the stomach and bowels from all crude and unhealthy matter, and to put the secreting organs in a healthy condition. It is a fact always to be observed, that if all the internal secreting organs perform their functions in a healthy manner, the external organs will perform their duty in like manner; and in this fact lies the whole secret in the management of eruptive diseases. The skin is evidently a secreting organ; and if it is called upon to perform in the cure of disease, first make the internal and more vital secreting organs do their duty properly, and the skin will always be found ready to sympathize and fulfil its duty.

The first thing, then, to be done in varioloid, as well as in smallpox, is, to give the following medicine:

*Recipe* : Calomel, twelve grains.  
Rhubarb, twelve grains.

Mix ; and, for a child two years old, divide into six powders, and give one every two hours, in a little sirup, till they operate well. If the last operation is dark or green, give,

*Recipe* : Calomel, six grains.  
Rhubarb, three grains.  
Salts Nitre, three grains.

Mix. Divide into six powders, and give one every four hours, in sirup, till they operate two or three times ; and then follow with a dose of castor-oil. If the pustules seem not to fill well, give the following :

*Recipe* : Spirits Lavender, compound, half ounce.  
Spirits Nitre, two drachms.

Mix. Give ten drops every hour, in balm, hyssop, or sage tea, and continue this till the pustules fill.

The bowels may be kept open with castor-oil, senna tea, or magnesia. The diet should be rice-water, arrow-root, sago, gruel, or milk and water. No salt or grease should be allowed till the secondary fever is all removed ; and this comes on when the scabs begin to dry and fall off. When it makes its appearance, a dose or two of the powders in the first prescription should be given.

If the throat is sore, as it is generally, a mouth-wash should be used, made of sage, borax and honey, or yellow root and loaf sugar. The patient, in varioloid, as well as in smallpox, has a full flow of saliva from the mouth, produced by the pustules coming out in the mouth and throat.

The room should be well ventilated, and the bed-clothing should be light, according to the season. When the scabs begin to fall off, the bed should be freed from them twice a day. The same care in washing out should be observed as in smallpox, and also in the diet in convalescence. (*See chapter on Smallpox.*)

#### OF THE COW-POX, OR KINE-POX.

The importance of this subject demands particular attention ; and so much are the inhabitants of this country indebted to the cow-pox, for the preservation of beauty as well as life, that no one can feel uninterested in reading the account of its discovery, and the manner in which it was brought into use. It will be a subject of equal interest to know when the kine-pox is genuine

and when it is not; and we shall, therefore, make no apology for the course we shall pursue in treating this subject.

"This disease attracted attention in the county of Dorset, in England," about forty or fifty years since, as a pustular eruption derived from infection; "chiefly showing itself on the hands of milkers, who had milked cows similarly diseased." It was found to secure those who had thus taken it, from the smallpox. So extensive was the general opinion on this subject, that an inoculator who attempted to convey the smallpox to one who had been previously affected with the cow-pox was treated with ridicule. The truth of this popular opinion was tested, however, by proper persons, and it was found that "no smallpox ensued." About the same time, a farmer of sagacity, by the name of *Nash*, duly attending to these facts, had the courage to attempt inoculation on himself; and "the attempt succeeded completely."

Similar facts were communicated to *Sir George Baker*, who, however, declined engaging in a controversy on this subject, having just gotten through one on the subject of the endemical colic of Devonshire; in which, however, he was successful; but he did not wish to tread the thorny paths of controversy. Gloucestershire, however, "another dairy county, had witnessed the same disease with similar consequences, and the same opinions generally prevailed in distant districts of both counties," and thus afforded proof that the power thus ascribed to cow-pox was not wholly visionary. (See *Evidences delivered before the House of Commons*.) *Dr. Jenner*, then resident at Berkley, in Gloucestershire, took up this subject, and pursued it with great judgment and unabating ardor. He, however, was first foiled, by not distinguishing between the genuine and the spurious cow-pox; for it appears from the history given of the first discovery of cow-pox, that there was a genuine and a spurious kind. The cow is subject to both; but the spurious kind is not a preventive of smallpox, while the genuine is a certain preventive, as we shall see before we are done with this subject. *Dr. Jenner*, having at length made himself master of the distinctive character of the genuine vesicle, ventured to publish the discovery, in 1798, and to recommend inoculation with the virus of "vac cine, as a substitute for variola," or smallpox. This discovery was liberally remunerated by Parliament; and, since that time, vaccination has passed, with rapid progress, over every part of the world, from the Arctic circle to the extremes of Asia and



Africa, and has been adopted by civilized nations, by the black, as well as the white, "the Jew, the Hottentot, and the Hindoo."

The cow-pox, as it presents itself in its present state, involves the four following varieties :

*First.* Natural cow-pox. This is the genuine cow-pox, and ordinarily appears on those who receive it from the affected cow.

*Second.* Spurious cow-pox. This is an ineffective modification of cow-pox, and resembles the genuine, but, nevertheless, is spurious. It is not a preventive of smallpox.

*Third.* Inoculated cow-pox. This is the genuine cow-pox, as it appears in inoculation.

*Fourth.* Degenerated cow-pox. This is that form of the pox which has lost its specific power from unknown causes.

We shall take up these different heads as above named, and endeavor to make them so plain that those who read may understand, and be enabled to preserve themselves against smallpox, by using the genuine cow-pox, which, in every case, will protect them.

*First.* The natural cow-pox is received on the hands of those who milk the cows, the pustules being broken by the hand and the matter lodged on the fingers, into some small cracks, and thus affecting the dairyman. The vesicles are more on the hands, or such parts as have been in contact with the affected udder. The vesicle is, at first, "of a bluish tint;" the fluid, at first, limpid, afterwards opaque and purulent; the glands under the arm frequently enlarge, and the person has more or less fever. The vesicles are apt to make their appearance about the joints or extremities of the fingers. The pustule is of a circular shape, with a slight depression in the centre.

The fever comes on with the usual symptoms of a febrile attack,—pain in the head, lassitude, chilliness, pain in the limbs and loins, sometimes vomiting, and a quickened pulse.

The headache frequently continues after the other symptoms disappear. In some cases there is delirium.

As the vesicle fills, an areola is formed around it, from an inch to an inch and a half in diameter; and it frequently becomes so full, in three or four days, that it bursts, and discharges an almost transparent fluid. In some cases the sores are troublesome to heal. The fever all disappears by the seventh day.

The fluid discharged from this ulcer will cause an eruption on any part of the body it touches; consequently, the eyelids, nostrils, lips, and other parts of the face and body that may be



touched with the fingers, having matter on them, are liable to become sore. In the affected cow, the tubercles are still larger; or rather, consist of vesicles surrounded by broad circular areolæ. The cow becomes sick and drooping, and yields but little milk. "The ulcers on the udder are full, and often obstinate to heal."

*Second.* The spurious pox to which cows are subject bears a close resemblance to the genuine, and is often confounded with it; yet it is destitute of any of the preventive qualities of the smallpox. The distinctive marks are these: "The vesicles are less uniformly circular; purulent from the first; without the bluish tint" of the genuine; "with little or no central depression." The use of matter from this vesicle, instead of the genuine one, has been the cause of the great number of failures with the cow-pox, and will ever prove ineffectual as long as this is the case.

*Third.* In the inoculated cow-pox with genuine virus, the symptoms are these: the vesicle is single, and confined to the puncture; the pustule, when ripe, is of a bluish brown in the middle. The fluid is clear and colorless, till the scab begins to dry; which, after the twelfth day, becomes hard, of a mahogany color, and falls off, or may be taken off. About the third day from the time the matter is put into the arm, a small red speck appears where it was inserted, which spreads till the ninth day when the areola is from one to one and a half inches in diameter. By the twelfth day the redness is all gone, and the swelling subsides. If the fluid in the vaccinated pustule is not transparent, the pustule is spurious, and will not prevent smallpox.

The manner and place of inserting the matter is of great importance, in order that it take in a genuine manner. The point for inserting the matter is on the outside of the arm, immediately over the insertion of the deltoid muscle. This point may be found by placing the finger on the outside of the arm, just below the shoulder joint, and drawing it downwards, till you feel a small depression in the muscle; if you press hard on that point, it will feel tender. In grown persons, it is about five inches from the top of the shoulder; but in children the distance is much less, and the depression less distinct. The matter should be inserted here, because it will be more likely to be taken up by the absorbents, and carried into the circulation, thus making the effect constitutional instead of local. When the matter is inserted over the body of a large muscle, a failure may be expected. The matter, it is true, will produce a sore, insert it

where you may; but the effect may not be constitutional, and therefore, not a preventive of smallpox.

These facts in relation to the cow-pox should be strictly remembered:—It is filled with clear fluid, is round externally, and flat on the top, with an evident depression, slanting gradually from the edge to the centre; and when these appearances are wanting, the pustule is not genuine.

The patient must have more or less fever, and the pustule must not dry before the twelfth day. The fever from vaccination rarely requires medical treatment. If, however, it runs very high, a cooling purgative may be given.

*Fourth.* There is variety of *vaccina* which is denominated degenerate cow-pox by *Sir Gilbert Blane*, the manifestations and results of which are these:

“The vesicle is uncertain, and anything but genuine in appearance; the fluid in the vesicle is often straw-colored, or mattery; the areolæ are absent, or not perfect,—scab forms too soon.” Inoculation from this species will not prevent smallpox.

Here is another source of failure, when it is for want of judgment, and not the fault of the cow-pox. *Dr. Goode* says that “vaccine virus seems to undergo a spontaneous alteration in a certain period of time, whatever be the caution with which it is preserved.” In passing through the human subject, it seems to be modified and rendered milder; for, “a person immediately inoculated from the affected cow uniformly suffers more than when one person is inoculated from another.” It has been satisfactorily proved that the fluid loses none of its virtues by passing through hundreds of persons. This has been tested, by taking matter that has been passed through individual after individual, to an almost indefinite extent, and then “introducing it into the cow, and it still possessed all its original powers.”

But after all that has been said and done, there are some persons who will take the varioloid, even after they have had the cow-pox in its best form; but they will have it very lightly. It has been satisfactorily proved by the British surgeons, who have experimented by the thousands and tens of thousands, that the cow-pox, in its genuine form, will save nine hundred and ninety-nine in a thousand from smallpox, and perhaps not so many from the varioloid; but those who have either, will have it lightly.

The cow-pox was first thought to be communicated to the cow's bag from the grease in the horse's heels, but this was ascertained to be a mistake. It is certainly an original disease in the

cow's udder; so say Drs. *Goode* and *Jenner*, and many others. Of late years, a long series of experiments, a full account of which may be seen in the different European medical periodicals, show that the *vaccina* may be produced by inoculating the cow's udder with smallpox matter, and raising a vesicle, the matter of which will prevent the smallpox from taking in the human system. But this is a late discovery, and can, by no means, do away with the idea that the *vaccina* is produced by an original disease in the cow.

It is proved that the virus procured from the cow by inoculation with smallpox matter acts more powerfully on the human species than the genuine vaccine matter as obtained by Dr. *Jenner*. It is no proof, either, that the cow was originally inoculated with smallpox matter, because the matter from her bag produced by the introduction of smallpox matter there will prevent the smallpox in man; for the grease in the horse's heels will also prevent the smallpox in man, and yet it is very different from the *vaccina* or *variolous* matter. Dr. *Jenner* has deservedly immortalized his name, by the able and unremitting attention he gave this subject, in bringing it before the world, and establishing its claims to the high virtues of arresting that most loathsome of all diseases, the smallpox.

#### OF THE CHICKEN-POX.

This is an eruptive disease. The vesicles are scattered over the body; they are transparent at first, and pea-sized. They are red at the base, and always pointed at the top; never flat, like varioloid, nor depressed in the centre, like smallpox; but roundish, and sometimes very slightly flattened on the top. The fluid they contain is at first clear, or nearly so; afterwards, it turns to a straw color, dries away, and falls off. It leaves no pit in the skin, except in a very few instances.

The eruption is mostly confined to the face, neck and arms, with a few vesicles on the body and legs. It is a peculiar disease, and depends on a specific contagion. The child is sometimes feverish for a few days, but is rarely confined to the house from indisposition.

TREATMENT.—The treatment is simple. Cooling drinks, a light diet, and a dose of *salts* or *castor-oil*, are all that is required in most cases.

When the scab is thrown off, it leaves no pit, nor do any unfavorable constitutional symptoms follow it.

The *water-pox* is so much like the chicken-pox that it scarcely needs a further description, except that the vesicles are generally more numerous, and are filled with clear water, which is discharged in a few days, and the pock dries away, requiring no medicine for its cure.

#### OF THE HORN-POX.

This disease is called by *Dr. Goode* "the horn or crystalline pox." It is manifested by all the signs and symptoms of the smallpox, except that they exist in a milder degree than in the distinct smallpox. The patient is attacked with pain in the head, back and limbs; pain and sickness at the stomach, and sometimes vomiting; soreness in the flesh; the appetite fails, and the patient is generally sleepless for a few nights.

This disease is evidently produced by the contagion of varioloid having undergone some peculiar modification, or some peculiar state or condition of the system, which brings out a different result. The danger in horn-pox is even less than in varioloid; but more than in chicken-pox, or water-pox. We regard it as the medium action between varioloid and chicken-pox. We have seen a number of cases of horn-pox during the prevalence of varioloid.

The eruption is not extensive, nor does it remain long on the surface. The pimples rise up suddenly, with a red base; they are semi-transparent and rise upright, and are almost pointed. They suppurate imperfectly, and soon form a dry, horny scab, which is of a light brown color in dark skin persons, and whitish in those of fair skin.

The pock, in three or four days, looks more like the spur of a young rooster of three or four months old than anything else; and it is from this that it takes its name. It drops off in four or five days, and leaves no pit.

We believe the disease to be contagious, as all other eruptive diseases are, but not unfrequently the product of varioloid contagion, peculiarly modified by the constitution it enters. But, like all other diseases, it loses part of its violence by passing through the modifying constitution, and therefore is not capable of reproducing the varioloid, but the horn-pox only. It does not seem to be very contagious, even under the most favorable cir-



umstances for its communication. We have frequently seen it pass through all its stages, there being others in the room all the time, who had neither had it, varioloid nor smallpox, and they did not take it. It is true that they had been vaccinated; and vaccination, as far as our observation extends, is a perfect security against it, which is another proof that it is of smallpox or varioloid origin. We have seen, perhaps, twenty cases of it, in the course of thirty years' practice.

TREATMENT. — The treatment is simple, if you can be sure it is the horn-pox; but as the symptoms are so nearly allied to those of varioloid, it would be well always to commence the treatment as you would in the varioloid, and continue it till the eruption shows itself and defines its character. Cooling drinks, and acidulated waters, such as *lemonade*, and *cream of tartar in water*, may then be given; and the bowels kept open with some gentle purgative, such as senna tea or castor-oil, rhubarb, &c.

The diet should be light and thin.

When the pustules fall off, the patient should be carefully washed, and care must be taken not to cause a relapse by eating too much.

#### OF PEMPHIGUS, OR VESICULAR FEVER.

This disease attacks grown persons as well as children; but as children are subject to it in its three varieties, it is thought proper, in order to make this work complete, to notice them all.

The *first*, which is the subject of this chapter, is the common vesicular fever. Many writers, such as *Savage*, *Gulbrand*, *Cullen*, etc., think the different varieties of this disease only symptomatic manifestations of some other disease; but when we find *Home*, *Bontius*, *Seliger*, *Langhous*, *Withers*, *Clarkson*, *Christie*, *Ring*, *Browne*, *Stewart*, of Aberdeen, and *Goode*, all of the opinion that this disease is, in many cases, *idiopathic*, we feel justified in giving it a place as such in the present work. Some slight degree of lassitude, sickness and headache, having existed for a day or two, small blisters, about the size of a pea, make their appearance over different parts of the body, and not unfrequently in the mouth, throat, stomach and bowels. These vesicles gradually increase, till they become as large as an almond; and, "now and then, they are to be met with as large as a walnut." The vesicles are surrounded by an inflamed margin or *areola*, and distended with a slightly yellowish fluid or serum.



The child not unfrequently has a difficulty in swallowing, with nausea, vomiting, and a sensation of soreness in the abdomen, the vesicles being sometimes so numerous as to run into each other.

The pulse, during this time, is small and frequent, and the patient feels very feeble. "If the vesicles are not broken, they fill with a yellowish serum, which is again absorbed into the system, in the course of three or four days." The absorption of the fluid from the vesicles is more favorable for the patient than breaking them and discharging the fluid, for troublesome sores are apt to follow the breaking of the vesicles. Pemphigus resembles the smallpox, in the particular of its frequently leaving pits in the skin, and the place which the vesicle occupied remaining of a dark color for some time after the sore heals.

In the third volume of *Medical Facts and Observations*, *Dr. Winterbottom* takes particular notice of this occurrence. We are to be influenced in our opinions of the favorable or unfavorable termination of the disease, by "the seat and appearance of the vesicles." "When they appear only on external parts, and are not numerous, they demand little attention." — *Thomas*. But when they are numerous, and attack the internal, as well as the external surface, and the pulse is hard and small, with great prostration of strength, the danger is great.

Another unfavorable symptom is found in the appearance of the vesicles when they break; that is, if the sores turn livid, and are disposed to gangrene or mortification. These latter symptoms rarely occur, except where the symptoms have been of the typhus character.

From our own observation, and the opinion of reputable medical authors, we are fully authorized to say that this disease is not contagious.

**TREATMENT.**—In order to treat this disease correctly, we must particularly observe the two following facts:

*First.* Whether the fever is of an inflammatory nature, and accompanied with a strong and increased action of the arterial system; or,

*Secondly.* Whether the fever has a tendency to the typhoid type, and is marked by great debility, and other symptoms which denote a tendency of the fluids to putrefaction. In the first form of the disease, when the fever is high and the pulse full and strong, the patient should be bled. The following medicine, for a child six years old, may then be given:

*Recipe* : Ipecac., twelve grains.  
 Tartar, two grains.

Mix. Dissolve the powder in six table spoonfuls of warm water; give one every fifteen minutes, till he vomits freely, and then turn it down with gruel. Nothing cold should be taken till the operation is over. This should be followed, in six hours, with the following purgative :

*Recipe* : Calomel, six grains.  
 Rhubarb, ten grains.

Mix. Divide into three powders, and give one every three hours, till they operate freely; after which, give the following mixture :

*Recipe* : Sulphate Quinine, ten grains.  
 Elixir Vitriol, thirty drops.  
 Pure Water, one ounce.

Mix. Shake the vial till the quinine is dissolved, and give twenty drops, in a little water, every four hours; keeping the bowels open with the following medicines :

*Recipe* : Cream Tartar, half ounce.  
 Milk of Sulphur, half ounce.

Mix, and give a tea spoon level full, in sweetened water, every three or four hours; or just so much as will keep the bowels regular.

The diet should be very light while the fever lasts; but as soon as it is removed, the diet should be more generous.

If the vesicles break, dress the sores with simple cerate; or you may make the following salve :

*Recipe* : Bees-Wax, half ounce.  
 Mutton Tallow, half ounce.  
 Hog's Lard, half ounce.

Melt them all together, and dress the sores with the mixture.

If mortification is likely to take place, a charcoal and yeast poultice should be applied; or the inside bark of the common buckeye may be boiled to a strong ooze, and the parts frequently bathed in it, and then dressed with the salve mentioned above.

If the mouth and throat are much ulcerated, a gargle of a strong decoction of oak bark, sweetened with honey, or yellow root, prepared in like manner, will be found of great service. Where the ulceration has extended to the bowels, slippery-elm tea should be given freely.

As the patient recovers, exercise in the open air will be beneficial.

## OF GLANDULAR PEMPHIGUS.

This form of the disease is but little known in the United States; but it may become a disease of greater frequency, and we therefore deem it proper to notice what authors have said concerning it. The information, therefore, which we shall give in this chapter, will be taken from those who have written on this disease.

*Dr. Langham*, a Swiss physician, who observed it in the spring and summer of 1752, in the lowlands of his country, (see *vol. 1st*, 1787,) says of it: "It commenced with a sense of tension in the fauces, and a slight pain spreading behind the ears," and extended "to the neck and breast, accompanied by the symptoms that mark the first stage of fever, but not succeeded by a hot fit." The pulse was feeble, and "greenish bilious matter was thrown up from the stomach." "The neck swelled, externally and internally, about the fauces." "The blisters" which arose "were about the size of filberts," but they were not very painful; they contained a yellowish fluid, of an offensive smell. These were soon succeeded by a few vesicles, scattered over the body and limbs, which, if not opened, "collapsed on the second, third, or fourth day," and were covered by a whitish crust. "During this period, the tumor of the neck often suppurated," or suppuration took place in some other glands, such as the parotid under the ears, or the axillary glands under the arms, or the inguinal glands in the groin. "The virus of the disease being thus discharged by different outlets on the surface of the body, the patient recovered."

"But if, instead of the matter finding its way out of the system by some of these outlets," an abscess should form in the lungs and breast, "the patient died from suffocation;" or if the matter lodged in any of the external vesicles was by accident repelled before any glandular suppuration took place, "the patient died almost as suddenly." *Dr. Langham* states that this form of glandular pemphigus is highly contagious, "affecting every member of the family where it appeared, and generally proving fatal."

TREATMENT.—*Dr. Langham's* treatment was, *first*, on the depleting plan. He bled once or twice, and then gave strong sudorifics, so as to excite a strong determination to the skin. These may be prepared in the following manner :

*Recipe* : Black Snakeroot, one drachm.

Make one pint of strong tea, and add to it the following :

*Recipe* : Pulv. Camphor, twenty grains.  
Tartar Emetic, three grains.

Give a table spoonful every half hour, till the patient perspires freely. Then give a gentle purgative of,

*Recipe* : Calomel, ten grains.  
Rhubarb, ten grains.

Mix. Divide into three powders, and give one every two hours, till they operate freely.

The strength is to be supported by cordials and wine, and the diet should be light.

#### OF INFANTILE PEMPHIGUS.

This form or variety of the disease generally appears a few days after birth. But *Dr. Willan* gives a case where it occurred in a child ten months old.

When it appears on infants, it is attended with fever and languor ; and, in a day or two, the eruption appears in vesicles on the neck, upper part of the breast, on the abdomen, in the groins, and on the scrotum and inner parts of the thighs. They arise in successive crops, break, and expose a surface that heals with difficulty, "and more generally enlarges its boundary." The little patient is apt to be worn out with pain, restlessness, and want of sleep.

TREATMENT.—The bowels must be kept open with gentle aperients, such as,

*Recipe* : Magnesia, one drachm.  
Rhubarb, six grains.

Mix. Divide into six papers. Give one every three or four hours, in sweetened water, so as to keep the bowels open.

The strength must be supported by cordials and wine whey, if the child be old enough to take it. If the pain demand it, a few drops of elixir of paregoric may be given occasionally.

The sores, when the blisters break, must be dressed with simple cerate ; but, unfortunately, in very young infants, very little can be done in this case.

## OF FROST-BITE, OR CHILBLAIN.

When the fingers, toes or heels, have been exposed to intense cold for a sufficient length of time to destroy the vitality, or to stimulate the vessels into a high degree of action, the part swells, and becomes painful, and purple, or a pallid color. The pain is not constant, but rather shooting, and pungent; at particular times attended by an insupportable itching. The skin, in some instances, remains entire; in others, it breaks, and discharges a thin fluid.

When the degree of cold has been very great, and the application long continued, the parts affected are apt to mortify and slough off, leaving a foul and ill-conditioned ulcer behind.

Children and old people are more liable to be frost-bitten than those of middle age, and children that are of a scrofulous habit are more apt to suffer by frost-bites. The best mode of preventing this is to avoid with much care any exposure to extreme cold.

Those who have been once frost-bitten are more easily affected again by being exposed to the exciting cause; and, on the approach of cold weather, they should be careful to have the parts well guarded by woollen gloves or socks, and not to expose the hands or feet, when very cold, too suddenly to a strong heat.

Very old persons, whose circulation is languid, may be affected in the feet with frost while lying in bed, though their friends may have been careful on that subject; and, perhaps, the first thing they know, the parts begin to mortify.

**TREATMENT.**—Young persons, whose hands and feet ache very much from the effects of cold, are apt to hasten to the fire, and hold the affected parts very near to it, in order to relieve the pain. This is wrong. They should first place the frost-bitten part in cold water, and hold it there till the pain is removed; after which, it should be placed in water a little warmer, and kept there until the pain subsides again, and the parts feel supple. Then apply the following preparation:

*Recipe:* Alum, half ounce.  
Water, one pint.

Dissolve the alum in the water, and bathe the part with it freely and constantly, till the swelling is removed.

If this cannot be had, and the use of the cold water has been neglected till the parts begin to inflame, or the skin breaks, a



poultice made of roasted turnips will be very good; and this should be frequently renewed.

Should the parts be likely to slough or mortify, a poultice made of the ooze of the common buckeye bark, thickened with wheat bran, will stop the mortification. The parts should be freely bathed with the ooze, and the poultice afterwards applied. This should be renewed three or four times a day.

After the mortification has been arrested, a poultice of slippery-elm bark will remove the inflammation; when the sores may be dressed with the following ointment :

*Recipe :* Bees-Wax, ,  
Rosin,  
Mutton Tallow,  
Hog's Lard, —equal parts.

Melt all together. Dress the sore twice a day, always washing it with Castile soap and warm water before the salve is applied.

If proud flesh should spring up, —and it is apt to do so in frost-bites, —sprinkle a little burnt alum on the fungous granulations every day, till they are removed.

After a sore caused by frost-bite is healed, the parts remain tender for several years, and are easily affected again by frost. When this is the case, it becomes very tender, and scales, or the skin comes off like chaff, leaving the part very sore, tender, and painful. The best remedy we ever knew for this is the thin membrane from the leaf-fat of a hog. This should be applied night and morning, for a few times; it will remove all the pain, fever, and soreness, and the part will heal kindly.

Loose shoes should be worn afterwards, or corns are apt to form on the frosted parts and become very troublesome.

#### OF BURNS.

There are so many accidents to which children are subject by fire, that we should always be on our guard on this subject. We design, in this place, merely to state the mode of treatment for injuries of this kind.

The degree of injury sustained by the parts to which the hot substances may be applied is owing to the quantity of heat contained in that substance, and the extent of the surface with which it comes in contact. When the heat has not been great, and the surface acted on is small, the danger is also comparatively small; but when the degree of heat has been great, and the surface large, the danger is proportionately increased. But even

when the surface is small, the degree of heat and depth of injury may be very dangerous.

Again; the degree of heat may be comparatively small, but the surface so large that the danger from irritation may be great.

Again; the surface acted upon may be small, and the degree of heat small, yet the part affected by it may be vital, and consequently the burn may prove fatal. We, therefore, see that the danger to be apprehended from burns will, in many cases, be owing more to the part burnt than to the degree of heat applied. The more vital the part, the greater will be the danger. To be burnt on the body is worse than to be burnt on the extremities; and to be burnt on the abdomen, or over the stomach, is worse than a similar injury on the back or shoulders. To be burnt on the face or head, though near the brain, is not so bad as to be burnt over the stomach or bowels.

As a general rule, the deeper the burn is,—that is, the more perfectly the flesh is killed,—the more danger may be apprehended from it; unless it be produced by the quick and glancing passage of a red-hot substance, that only touches and sears the skin, without killing the muscles.

TREATMENT.—For slight burns, when the skin is not taken off, the most comfortable dressing is that which excludes the air entirely from the stimulated surface. The following is very good: first wet the parts with spirits of turpentine, and then cover them with strained honey. This is an excellent remedy; or you may use the following:

*Recipe:* Hog's Lard,  
Yolk of Egg,  
Flour.

Mix in equal parts. Spread a plaster, and cover the burnt surface completely with it. The burn should be dressed as often as it becomes painful; afterwards, once in eight hours, till it heals.

When the parts are burnt deeper, and severer pain is produced, and some of the flesh is killed, or turned white, and the skin broken, the best application is spirits of turpentine, sufficient to wet the burnt surface. Raw cotton should be wet with the turpentine and linseed oil, and the burnt surface well covered with it, so as to exclude the air. When the pain entirely subsides, and reaction takes place, if there is much redness or inflammation, apply a slippery-elm poultice, to remove that inflammation; when the wound should be dressed with simple cerate three times in twenty-four hours till it is cured.

When matter forms, it should be washed off with warm milk and water, or the mildest kind of soap and water; and, at all events, great care must be taken to keep the air from the sores as much as possible.

When the burn is deep, and the flesh crisped, the following remedy is best for the first dressing :

*Recipe :* Spirits Turpentine,  
Alcohol, or Whiskey,  
Olive Oil, — equal parts.

Anoint the parts freely with this mixture, and then dress with the following salve:

*Recipe :* Melted Bees-Wax, two ounces.  
Spirits Turpentine, two ounces.  
Lapis Calaminaris, half ounce.  
Yolk of Eggs, four.

Mix these with the melted wax, so as to form a completely-mixed salve; and, after anointing the parts with the above liniment, apply this salve so as to exclude the air. This will, in a few days, excite the living vessels to throw off the dead parts, when inflammation will take place. The slippery-elm poultice should then be used, till suppuration comes on freely, and the dead parts are thrown off; after which, the wound may be dressed with the following ointment :

*Recipe :* Bees-Wax,  
Hog's Lard, — equal parts.

Mixed well together, and used twice a day. If much inflammation arises, apply the slippery-elm poultice, till it is removed, when the salve must be resorted to again, and laid over the whole sore every time it is used.

If fungous or proud flesh spring up, apply burnt alum or lunar caustic to it once a day, till it is all removed. If any redness remains, use cooling poultices till the sore becomes white before it heals; otherwise a red scar will remain.

All this time, the bowels must be kept open with cooling purgatives, such as salts, senna tea, cream tartar, gentle pills, castor-oil, &c.

The diet should be of the lightest kind, in all cases of severe burns; and exercise should be prohibited till the parts are entirely healed.

When the tendons are injured by deep burns, they are apt to contract in healing; in which event splints should be used, and properly applied, so as gradually to extend the limb, and keep it o till the sore is perfectly healed.

When the fingers or toes are burnt, at every dressing they should be separated with greasy rags, and kept so till they are entirely healed. And this treatment must be adopted with every part of the body that grows together, or touches an opposite surface. They should never be allowed to come in contact while raw. All inflammation should be removed from the tendons, by poulticing and low diet; otherwise they will heal with knots on them.

Perhaps no injury requires greater care in its treatment than those occasioned by burns. A slight burn may make a sore for life if it is not treated correctly at first.

#### OF WHITLOW.

This disease, of which there are four species, is situated in the extremities of the fingers.

The first kind is nothing more than an inflammation, located immediately under the cuticle, near the edge of the nail. It suppurates, breaks and soon gets well. It sometimes travels nearly around the nail; and is then called, in common language, *a run-round*.

A light bread poultice will soon cure this form of the disease.

The second form is similarly situated, but lies deeper. This should be poulticed till matter forms, when it should be lanced, and dressed with simple cerate.

The third form is called *felon*; it is situated much deeper, and is very painful. When it first makes its appearance, apply a plaster of,

*Recipe* : Opium, one drachm.  
Asafœtida, one drachm.

Moisten, and spread a plaster, wet with spirits, and keep it constantly bound over the end of the finger. If this does not scatter it in a day or two, the best remedy will be to lay the finger open to the matter, with a lancet, razor or knife; after which, it must be dressed with simple cerate.

The fourth species is seated still deeper, under the periosteum, and even in the bone; and when the bone is inflamed, it is called a bone felon. If this is not properly managed, the bone will soon become deeply diseased, and die, as will the periosteum and tendons; the matter will find its way up the tendon, and even into the arm, and much pain and swelling will be the consequence. The opium and asafœtida plaster may here be tried; but should it not prevent its progress, the finger should be laid open

to the bone, and a poultice, made of the outside of rusty bacon and the leaves of rue, should be kept on it. We have frequently known the bone to be saved by this remedy.

When the healing process begins, fungus is apt to shoot out. This must be taken off with burnt alum, or red precipitate, which should be sprinkled on it twice a day, till it is all removed. A dressing of simple cerate should be kept over the wound till healed.

The third and fourth species of this disease frequently destroy the first, and sometimes the second, joint of the finger. We have never seen a case in the toe.

This disease is often produced by bruises or punctures. When a puncture is received in the end of the finger, beef's gall applied immediately will prevent this serious and painful termination.

#### OF THE DISCHARGE FROM THE VAGINA OF INFANTS.

We occasionally meet with a case of this description in infants, in early age, from whom the discharge is thin, acrid, and sometimes purulent.

But there is another form of this disease, more aggravated in its character, and more difficult to cure. This discharge is more like matter, and comes from the vagina or labia; and girls of five or six years old are afflicted with it. It may continue to womanhood, and lay the foundation for aggravated leucorrhœa or whites. If neglected, it destroys that healthy, rosy appearance of the cheeks, which is so much admired.

**TREATMENT.**—For the first form of this disease, in infants, nothing more is necessary than to cleanse the parts two or three times a day with warm water. Keep the bowels regular, and in a week or two the disease will yield.

For the second form the same remedy should be used; but, should it fail, then, in conjunction with it, give these drops:

*Recipe:* Balsam Copaiba, half drachm.  
Harlaem Oil, two drachms.

Mix, and give, to a child five years old, five drops three times a day, on sugar. Keep the bowels open with rhubarb; or, if too loose, give a dose of magnesia two or three times a week. If the child be weak, give thirty drops of Huxham's tincture, in sweetened water, three times a day, till cured.



## OF SCURFINES OF THE HEAD.

If the child's head is not kept clean, there will, within the month, a dark-colored scurf accumulate upon it, extending from the top to the back part. It generally commences near or over the front mould of the head, and extends back till it covers the whole crown. A considerable itching takes place under it, and by rubbing or scratching, it is thrown off in thick scales. The itching is so severe, at times, as to cause the child to fret and cry.

This scurf is occasionally very offensive, smelling like sour curd. When the surface is made bare, a great number of small pustules may be seen, which throw out large quantities of acrid lymph, which, becoming dry, forms a crust; and if this crust be removed, the skin beneath will be found inflamed. It will soon be replaced, however, by the drying of the lymph which the inflamed vessels throw out.

This evil is owing entirely to neglect, which grows out of an old superstitious notion, that to remove this dandruff (as they call it) will injure the child's senses.

**TREATMENT.**—If the child be neglected till this crust forms, it should be removed in the following manner :

*Recipe :* Pulv. Borax, one ounce.

Dissolve one fourth of this powder in a pint of warm water, and wash the child's head, applying it for a sufficient length of time to soften the crust. It may then be removed by the use of a soft cloth; but it should not be combed off, for that will create too much irritation.

If the crust has been neglected, till it has become thick, and the surface beneath much inflamed, it would be better to apply the following mixture to it, freely, over night :

*Recipe :* Olive Oil, half ounce.  
Whiskey, half ounce.

**Mix.** Apply this freely to the head at bedtime, and cover the head with a suitable cap; and the next morning, use the borax and warm water. This remedy should be repeated every day, till the scurf is all removed; but the use of the borax and warm water should be continued, till all the inflammation is removed from the skin, when a suitable hair-brush for infants should be used daily, to prevent its reaccumulation.

To prevent the crust from forming at first, the hair-brush

should be used after bathing the child's head in the morning. The daily use of the infant's hair-brush, from the birth of the child, will insure a clean skin and a fine head of hair. A fine-tooth comb should not be used on an infant's head till it is six or eight months old; and if proper care be taken, there will be no need of it, even at that age.

## OF SCALD-HEAD.

This disease is situated in the scalp, and first appears in circular, flat scabs, with an irregular edge, attended with considerable itching. The eruption, if neglected, will extend all over the head, pass down the ears, and appear on the face and neck. The cuticle below the scabs is red, and dotted with points, from which oozes fresh matter.

This disease destroys the hair, and is contagious. It is found chiefly in children, sometimes as early as the sixth or eighth month, and from that to ten years; but adults are rarely affected with it. From the quantity of the discharge, the hair is matted together, the scabs become considerably thickened, the ulceration spreads into the substance of the skin, and even the muscle beneath, and the hard patches, in some cases, seem to be fixed upon a body of offensive matter beneath. The glands on the sides of the neck enlarge and harden; first in a chain of small lumps, when they enlarge, some of them inflame, and a slow process of suppuration takes place. The ears not unfrequently become inflamed within and without, and pour out a quantity of ichorous matter, which is so acrid that it produces a sore on any part of the body upon which it may fall. The arms and breasts of nurses are frequently affected in this way.

The causes of this disease are, filth, bad nursing, unwholesome diet, want of pure air, and whatever else has a tendency to weaken the system generally, and irritate the skin locally.

TREATMENT. — As the fluids of the system, and especially the lymphatic system, become depraved in this disease, it is of much importance to correct them, in order to insure a cure. In all diseases of the lymphatic system, a general debility of the whole system is sure to prevail. We must, therefore, direct our remedies to this effect as well as the local disease.

For the first indication, we should give the following drink:

*Recipe:* Spanish Sarsaparilla, four ounces.

Cut this root fine, and to one twelfth part of it, in a pitcher, pour one pint of boiling water at night ; let it stand till morning ; pour off the liquor, and add one ounce of white sugar, and two or three thin slices of lemon, or twenty grains of the salts of lemon. This quantity should be drunk every day by a child seven years old, and more or less in proportion to age. If the Spanish sarsaparilla cannot be obtained,— as it cannot in many places,— take the following articles :

*Recipe :* American Sarsaparilla, two drachms.  
Burdock Root, two drachms.

Make fine, and mix them. Prepare them as above, and take in like manner. This quantity should be taken every day.

The stomach should be first cleansed by an emetic.

*Recipe :* Ipecac., ten grains.  
Tartar, half grain.

Mix, and dissolve in four table spoonfuls of warm water. Give one at first, and repeat half as much every fifteen minutes. till the child pukes freely ; after which, warm water must be given every time it pukes, till it has three or four operations up. It must then be turned down with a little gruel, and nothing cold must be taken till the operation is over.

If the bowels should not keep open, give the following medicine :

*Recipe :* Sirup of Rhubarb, one ounce

Give a tea spoonful two or three times a day ; or,

*Recipe :* Senna Leaves, two drachms.

Make a tea cupful of strong tea, and give it, in small portions, every half hour, till it operates on the bowels.

If the tongue should be coated, give :

*Recipe :* Calomel, ten grains.  
Rhubarb, ten grains.

Mix. Divide into six powders, and give one every three hours, till they operate.

We now turn our attention to the head. The hair must first be clipped as short as possible, and then the scabs must be washed with mild soap and water, till they become soft. Wipe the head dry, and apply the following ointment :

*Recipe :* Hog's Lard, two drachms.  
Flower Sulphur, one ounce.

Mix them perfectly. Grease the head all over with this ointment, and put on a cap. This treatment should be continued

twice a day, till the scabs become soft and begin to loosen, when the following ointment must be used :

*Recipe :* White Precipitate, two drachms.  
Venice Turpentine, half ounce.  
Mutton Tallow, two ounces.

Mix these articles perfectly, and apply freely after each washing. Should this fail, use the following, in like manner, after each washing :

*Recipe :* Calomel, three drachms.  
Simple Cerate, three ounces.  
Venice Turpentine, half ounce.  
Balsam Peru, two drachms.

Mix them perfectly, and use as above directed.

As often as the scabs become loose, they should be lightly removed with the teeth of a comb; and when they are all removed, if the skin is red, and a number of small points appear, which throw out a serous fluid, wipe the head dry, and dust the surface with the following powder, before the ointment is applied :

*Recipe :* Lapis Calaminaris, half ounce.  
Calomel, two drachms.

Mix well, and dust it carefully over the raw surface, before you apply the ointment.

The child's bowels should be kept open all the time with some gentle purgative. It should live on a light diet, and avoid exposure to wet or cold.

The child should sleep alone, or it will communicate the disease to others.

#### OF THE RINGWORM SCALD.

This is a disease of children, and is situated on the head. It appears in clusters of very minute pimples, in circular spots of baldness, with a brown or reddish, and somewhat scaly, base.

This disease has been known and described under different names, from the time of the Greek writers to the present day.

There is sometimes only a single plat, and the pustules may be so small as to elude observation unless very closely examined; but there is a perceptible roughness attending them, and although the exudation is small, yet, in time, it forms a scab. This scab, on close examination, will sometimes present a shade of green on its edges. The spots extend in diameter, and in some cases cover a large surface on the head.

The hair is injured from the commencement of the attack, and

becomes thinner, and lighter in color, and breaks off short. In process of time the roots of the hair become diseased, and the spot bald; and if not arrested, the whole head will become bald, except a narrow strip of hair forming the outline of the scalp. It sometimes spreads from the head, over the forehead and neck, and may be communicated from one child to another.

This disease is most common in crowded factories, that are illy ventilated, and full of filth. It is most generally induced by uncleanness.

TREATMENT.—The treatment of this disease should be commenced like that of scald-head, to which we refer the reader. The following remedies should then be used, after the head has been well washed with soap and water:

*Recipe:* White Precipitate, two drachms.  
Mutton Tallow, two ounces.  
Otto of Roses, twenty drops.

Mix perfectly into an ointment; and, after the head has been well washed and dried, apply this ointment freely twice a day, and wear a suitable cap, of oiled silk or linen. If this should fail to cure in two weeks, you may use the following ointment:

*Recipe:* Iodine, forty grains.  
Mutton Tallow, two ounces.  
Sulphuric Acid, six drops.

Mix perfectly, and anoint the head twice a day. We have never known either of these remedies to fail.

The bowels should be kept open with some light purgative. The diet should be generous, but not strong; and the child should be allowed a sufficiency of pure air and healthy exercise.

#### OF TETTER-WORM.

There are five varieties of this disease of the skin. First, the *miliary tetter*; second, the *erosive tetter*; third, the *ringworm tetter*; fourth, the *rainbow worm*; and fifth, the *local ringworm* or *tetter*.

In the first variety, the vesicles are very small, clear, and in clusters. It may be situated on any part of the body, and progressively spread over the whole surface, succeeded by a fresh supply of eruptions. The vesicles contain lymph, which is sometimes of a brownish color; and, in the space of two or three days, other eruptions may arise near the former. These little points become of a milky color, and are perfected in ten or twelve days; but, about the fourth day, the inflammation around the eruption



assumes a duller red hue. The minute vesicles break and discharge a thin fluid; or dry into scales, which fall off and leave an inflamed surface below; and from this, fresh matter is thrown out, which also falls into scales and is thrown off, like the first. The itching is very troublesome; the dressings are apt to stick fast, and are removed with trouble and uneasiness to the patient.

*In the second variety, or erosive tetter*, the vesicles are hard, of small size, and crowded together. They contain a yellowish or reddish fluid, which is hot and acrid, corroding the surrounding skin, and spreading in crooked lines.

This form of tetter is often connected with the state of the stomach, and sometimes the constitution generally. When this is the case, the eruption is attended with a sensation of burning or scalding, and becomes a source of great irritation to the patient.

*The third variety is ringworm of the skin*, strictly speaking; this is designated by vesicles, with a reddish base, uniting in rings, the space within the ring being slightly discolored.

This is still a slighter form of tetter than the two preceding varieties. The vesicles never extend beyond the circumference of the spot affected, thus forming a regular outline. The central portion is, however, of a reddish color, and throws out some secretion, which dries, and forms into dry, fine, light scales, which, when they fall off, leave a tender surface beneath. This is all completed in about one week; but another circle is soon formed; and this may be repeated, the location changing every time, till the whole body, sooner or later, becomes the seat of this disease. Yet no constitutional symptoms arise. There is nothing to incommode the patient, but an inquietude, produced by the itching and irritation of the parts, especially when the skin is made moist by heat and perspiration.

*The fourth variety is the rainbow worm or tetter*, which is usually found on the hands or instep, and is peculiar in its appearance.

It is designated by "vesicles uniting in small rings, surrounded by four concentric rings, of different colors, vesicular and prominent."

This form is of rare occurrence; and, were it not for the sake of making this work as complete as possible, we should not have named this variety. The rings do not show distinctly at first, but are formed by degrees.

It generally takes about nine days for the vesicles to become

perfect; and in three days more they fall off, and in one week the surface is well.

These rings vary in color. The central ring is of a yellowish white; the innermost of a dark or brownish red; the second, of near the central tint; the third, which is narrower than the rest, is a dark red; the fourth, or outer ring, which does not appear till the eighth or tenth day, is of a light red color, and is gradually lost in the ordinary color of the skin. This species is only found in young persons, and is unconnected with any constitutional affection.

The *fifth variety* is the *local ringworm* or *tetter*. This form of the disease is attended with a considerable sense of heat and itching, or tingling irritation, in the region in which it originates. When it is situated in the lip, the adjoining part is hard and swollen, especially if it be in the angle of the mouth.

The form of this species is usually semi-circular; it does not usually spread to any great distance. Yet it is found sometimes within the mouth, and on the tongue, tonsils, and uvula, producing herpetic sore throat. It is not unfrequently the result of some disease of the digestive organs.

In ten or fifteen days, it terminates in a dark thick scab, leaving a tender cuticle beneath. It then commences again, and runs the same round.

**TREATMENT.**—The treatment of all these varieties is so nearly the same that it may be placed under the same head. Generally, no internal medicines are necessary, any further than to keep the bowels open, except in the last species, where the local ringworm is situated in the mouth, and is symptomatic of some derangement of the bowels. A few doses of *calomel*, or some other light purgative, may then be given, to correct the digestive apparatus, and put the secreting organs in good order. The following remedies may be applied to the parts externally:

*Recipe:* Yellow Dock Root, sliced, one ounce.  
Apple Vinegar, four ounces.

Add the root to the vinegar, and, after four days, touch the parts lightly with it twice a day; or use the following:

*Recipe:* Citron Ointment, half ounce.

**Touch the parts lightly with this twice a day; or,**

*Recipe:* Corrosive Sublimate, two grains.  
Strong Whiskey, one ounce.

Dissolve the medicine in the spirits, and touch the parts twice a day.

If the disease be in the mouth, give the following tonic :

*Recipe:* Huxham's Tincture, one ounce.

Give twenty drops three times a day, in water, to a child one year old; and increase or diminish the dose, according to age.

#### OF THE ITCH.

There are varieties of *itch*, which we shall describe before giving the remedies for any of them.

The *first variety* is the *rank itch*. The pimples are small and numerous, with a slightly inflamed base, and watery point. The tops, when made raw by scratching, cover themselves with a brown scab.

In the *second variety*, or *watery itch*, the eruptions are larger and more perfect, filled with a transparent fluid, with an inflamed base, intermixed with pustules, at times running together and forming a scab.

In the *third variety*, or *pocky itch*, the eruption is a distinct, prominent, yellow pustule, with a slightly inflamed base; occasionally running together, and forming irregular blotches, with a hard, dry, tough scab.

The *fourth variety*, or *complicated itch*, partakes of all the above varieties. The eruption is complicated of vascular, pustular, and papular pimples, coëxisting, spreading widely over the body, occasionally invading the face and neck, and sometimes all running together in a blotch.

The *fifth variety*, or *mangy itch*, has an eruption, chiefly of rank, numerous pustules, with a hard, inflamed base, rendering the skin rough and brownish. The itching is extreme, and the sores large from excessive scratching. This variety is produced by handling mangy animals, and, like all other varieties, is contagious. They are, however, not distinct species, but only a variety of the same disease. This is manifested from the fact, that, in different individuals, or under different conditions of the skin, even the mangy state itself will produce every other variety; while all of them may exist at the same time in the same individual, and are cured by the same remedies.

TREATMENT. — The first thing to be attended to in the cure of any form of itch is, to wash the whole body, from head to foot, with soap and warm water, rubbing it well with a rough cloth, and drying it with another.

If the bowels are not in a good condition, the following medicine may be given :

*Recipe :* Milk of Sulphur, one ounce.  
Rochelle Salts, one ounce.

Mix. Give from half a tea spoonful to a tea spoonful twice or three times a day, in molasses, and repeat this three or four days, and then wash again in soap and water as above. The following ointment should then be used :

*Recipe :* White Precipitate, two drachms.  
Hog's Lard, two ounces.  
Elixir Vitriol, one drachm.

Mix perfectly, and with it anoint all the sores lightly ; repeat this for six nights, and then wash out again. Or, you may cure by one night's anointing, as follows: After the system is prepared as above, take of *brimstone*, made fine, *two ounces* ; hog's lard, *half pint* ; stew them well together for half an hour, and apply the mixture freely for two hours, before a warm fire. After this, wash out with soap and water, and put on newly-washed clothes before retiring. The above quantity of brimstone and lard is enough to cure half a dozen children.

Instead of this, the following preparation may be used :

*Recipe :* Red Precipitate, half ounce,  
Venice Turpentine, half ounce.  
Mutton Tallow, one ounce.

Mix perfectly, and anoint with it three or four nights, and wash out.

A popular remedy is prepared by boiling four ounces of sour dock-root in half a gallon of water, to one quart, washing with it, and repeating two or three nights. This has no smell, and is innocent.

A strong ooze of poke-root is also a popular remedy ; but it is very poisonous, and should not be used. We have known persons fatally poisoned by its use. There is a variety of remedies used for the cure of itch ; but the preceding will never fail, if properly applied, according to the above directions.

#### OF SCROFULA.

Perhaps there is no disease to which the infant is subject that is so full of deep and abiding interest to its parent, and to posterity generally, as the one under consideration.

Scrofula is handed down from generation to generation ; and, instead of losing its character and formidable effects upon the

future generations upon which it is entailed, it only becomes more and more obscure in its latent character, but no less certain in its future development and effects. If, therefore, we should occupy a larger space on this subject than we have done on other diseases, the importance of the subject must be our apology; and it is hoped the mother who will take the time to read and study this chapter carefully, will find an ample remuneration in the lasting good she may do to her own children, and the incalculable benefit she may confer on posterity.

We may safely say that scrofula is a disease, the seeds of which are laid exclusively in childhood; but, in many cases, it is not developed till maturity. In order to make this subject as clear as possible, without entering into a physiological discussion of it, we shall take a view of its remote and proximate causes.

The lymphatic system is evidently the seat of scrofula, and the lymphatic vessels are those which carry a light-colored or clear fluid. It is generally called the absorbent system; but this, we believe, is not sufficiently full to convey the whole truth in relation to its functions and uses. "The lymphatic system is composed of three orders of organs."

1st. The absorbent vessels, so called, are an assemblage of small, delicate, transparent, uneven vessels, provided with valves, arising from innumerable roots or fibres, from the external and internal surface of the skin, from the membranes of the cellular tissue, &c. "These are distributed among all the organs, like the arterial vessels, of which they are the terminations, and terminate mostly in the thoracic duct;" but some communicate directly with the blood-vessels. "Some anatomists distinguish the lacteal from the lymphatic vessels;" but this is useless in practice.

2nd. "The thoracic duct, in which the major part of the lymphatic vessels terminate."

3rd. "The lymphatic or conglobate glands." These are small, oval, reddish bodies, composed of white vessels, blood-vessels and nerves, distributed here and there along the tract of the lymphatics, as the ganglions are "along the nerves." They are in greater abundance in the fat of the bowels, along the inside of the thighs, in the groin, about the neck, in the arm-pits, and generally in all parts of the body "where cellular tissue abounds."

The lymphatic system exercises a powerful influence on the nervous system; and we cannot, therefore, appreciate its func-



tions, without taking into consideration both its physical and vital forces; and by this, we become prepared to profit by our knowledge of the lesions to which the vital power of other systems is exposed. This would throw much light on those affections to which the lymphatic system is susceptible.

This system has two principal functions, — absorption, and the preparation and assimilation of the nutritive fluids.

Under the first head or function “is comprised everything that enters into the current of the circulation, to become identified with our structure,” excepting those substances which, being attracted from the air, mingle at once with the blood, in our respiratory organs.

“Absorption is effected,” *first*, on the digestive tubes, “on the materials designed to repair the constant waste of the body;” *second*, on the surface of the skin, and on the interior of the air-vessels of the lungs; *third*, in the interior of the cavities of the body. This mode of absorption is proved to exist by the mere fact of exhalation. If no absorption took place on the surface of the internal cavities, we should soon be filled with water. *Fourth*, in all the spaces between the folds of the cellular tissue, and “wherever there are any absorbing vessels.”

The second function of the absorbent system is the preparation and assimilation of the nutritive fluids. In the process of forming blood, the lymphatic or absorbent system holds an important place. By the powers of this system, the homogeneous mass, which is chymified by the gastric juice and vital functions of the stomach, loses its inanimate character, and begins to become animalized, and makes approaches to vital matter. It is here the first step is taken from the physical to the vital world; “a species of preparation which disposes them to be clothed with the properties of the blood which they are destined to renew.” This may suffice to show how great an influence is exercised by the lymphatic system on the material composition of the body. We see, therefore, that the formation of blood is essentially connected with the absorbent system; it follows all its alterations, all its vicissitudes. Thus we see that upon the lymphatic system depends, to a certain extent, emaciation of the body, as well as the excessive development of many of its parts, or redundancy of fat, serous infiltrations, enlargement of the glands of any and every part of the body, the removing of glandular swellings, **unnatural** depositions of fat, &c. These things are, however

all performed by a vital process, and not by humoral processes, or mere percolation.

*The remote causes of the scrofulous diseases.* These are *three*.

*First.* "Everything that may effect a diminution of tone in the solids," and particularly those of the lymphatic system.

*Second.* "Whatever may exalt the irritability of this system, or blunt its sensibility;" and,

*Third.* "Everything that occasions chyle or lymph of a bad quality," such as unwholesome air; any derangement of the offices of nutrition, or the functions of the skin or lungs.

We now come to the predisposing or principal causes of scrofula, the first of which may be said to be *hereditary tendency*. It is a lamentable fact, that a majority of the children that are born of scrofulous parents bring into the world with them this tendency, which, when it is hereditary, is apt to develop itself in early life. These facts are doubted by some; but there are too many instances by which this truth may be attested. We are acquainted with whole families in which the scrofulous taint has been perpetuated through two or three generations, says *Hufeland*. In countries where this disease is very common, as in England, the people are so well convinced of this truth, that one of the most important points in the choice of a wife or husband, is, that she, or he, shall be free from the scrofulous taint.

It is a fact in physiology, that constitutional diseases are hereditary. They are transmitted from parent to offspring, as life is transmitted "from one to another." Children are often born of scrofulous parents with the disease fully formed; we see this manifested in scrofulous sore eyes; in other cases, in eruptions on the skin; ulcerations, and discharges from the ears, in very early life; and these are all symptoms of scrofula in the bud. Others have enlargements of the glands; and others, spina-bifida, or disease of the backbone. The cellular tissue is often indurated and swollen. These symptoms were first noticed in France, and then in England and Germany, as signs of scrofula.

After all that has been said, it does not follow, invariably, that a child born of scrofulous parents should have scrofula, for "art sometimes contends successfully with nature," and the disease may be perfectly eradicated from the system, and thereby its train of procreation arrested.

*Of the age and sex most subject to scrofula.* All experience and observation go to show that children and women are particularly disposed to scrofula. This may not astonish us when

we recollect that weakness and nervous susceptibility are circumstances most favorable to its development. This subject is of too much importance to keep back anything that will throw light upon it, and we, therefore, say that nothing is more apt to communicate to children the disposition we speak of, than weakness of the parents, and especially weakness of the organs of generation, "an ordinary consequence of onanism and venereal excesses. This fate is reserved for the children of those who have abused their youthful powers." It is probably not so much the venereal virus itself that produces this melancholy effect as the abuse of venereal pleasures, and "especially masturbation." Experience has so fully proved the truths here stated, that one must be uncandid to call them in question. Is it not reasonable that exhausted parents must communicate to their offspring a character of debility, of which the lymphatic system, like other tissues, must partake? Children of aged and broken-down parents bring into the world a disposition of constitution which is easily awakened into scrofulous action, and that at an early period of life.

There is another fruitful source of scrofula, and that is, *syphilis of parents*. We shall, on this point, give an extract from *Hufeland*, which every physician of experience and observation will ratify. "It is certain that the scrofulous disease is often nothing but the consequences of syphilis. I have frequently seen syphilitic parents give birth to children, who, either at their birth or very soon afterwards, presented all the symptoms of the scrofulous taint; and it has been remarked that since the appearance of the pox, this taint has become much more common than it was before. At the present day, it is more frequent in those countries where syphilis is very prevalent, than it is in others. The very symptoms, in many cases, have a striking resemblance to *lues venerea*." However close and strong these remarks of *Dr. Hufeland* may be, every physician of experience and observation will bear him out in their truth.

Unwholesome food is another source of the scrofulous disease. Any kind of diet that the child's stomach will not properly assimilate into chyle, whether it be unwholesome for others or not, will, in that child, aid in laying the foundation of scrofula. Of this kind of diet, we may mention improper artificial suckling; the child taking impure or badly-prepared milk; for, of all the fluids of the human body, none is more endowed with vitality than milk. This is proved by the almost instantaneous influ-

ence exercised by moral affections on the mixture and intimate combinations of its constituent principles. "Milk is vital while enclosed in its secreting organs; and the vital principle which animates it, while it appropriates it to the infantile constitution, renders it, at the same time, more nutritious and more digestible." Compare the children that are nourished at the maternal breast with those that are artificially brought up, and we shall find, generally, that while the former are fresh-looking and healthy, the latter remain weak and languid, at least for the first one or two years of their existence. See how the consumptive invalid, who is ready to die with debility, bears a diet of milk sucked directly from the teat of the animal, or drunk while still foaming with its natural heat. But let the same milk become cool, and lose the heat of vitality which it brought from the animal that afforded it, and it will become indigestible, and sicken the invalid who drinks it. Whence arises this difference, if it does not depend on the principle of life with which the milk is animated while enclosed in the organs that prepare it, and which vanishes as soon as it ceases to be in contact with them? Sucking, then, is the order of nature, by which she supplies the infant with a portion of life from the mother, till its system becomes so perfected that it can vitalize its own food. Children, therefore, that are raised by hand, or artificially fed, are more liable to scrofulous affections than those that are properly nursed by the mother.

We are apt to forget that animals which furnish us with milk feed entirely on vegetation, or are herbivorous, while women derive their nourishment from each of the three kingdoms of nature. There is, therefore, a difference in the milk of animals and of women; and this difference is produced by the different aliments on which they live. There is, in the milk of animals, something of a vegetable nature that does not exist in the milk of women. Hence the frequent acidity of the stomachs of children that are raised by hand. The child, by the motion of its lips in sucking, occasions a flow of saliva into its mouth, which mixes with the milk, and enters into combination with it, thus causing it to be more easily digested.

It is a fact, that delicate stomachs bear solid better than liquid food; the only reason of which is, that solids are mixed with the saliva before they are swallowed, while liquids enter the stomach just as they are taken into the mouth. "It is difficult to portray all the difficulties that arise from artificial suckling."



The milk is sometimes too hot, sometimes too cold, sometimes too old, and sometimes spoiled.

Again ; the milk of different animals differs very much, —that of no two, perhaps, being exactly alike ; and, therefore, a mixture renders the milk less healthy than it would be if it were all taken from one cow. It will be easily perceived that chyle produced from a mixture of milk is not so healthy as that produced from the milk of an animal. If the child be put to the teat of the animal, or the milk be given while warm, just taken from the udder, it will be more easily digested, and furnish better chyle.

It is a little surprising, yet true, that ass's milk approaches nearer to that of women than the milk of any other animal.

All farinaceous substances that have not been fermented or well boiled, are difficult of digestion. The chyle they furnish is pasty, and of a weak consistency ; it circulates slowly in the lacteal vessels, and clogs them up. Such is the effect of potatoes when they constitute the principal diet of children ; and it is remarkable that scrofula is very common “where children are nourished on this root.” Vegetables that are very watery, and consequently contain but little nourishment, promote scrofula.

The habit of feeding children on a little of every kind of food, and thereby weakening the powers of digestion, and making bad chyle, promotes the scrofulous disposition.

Another fruitful source of scrofula is impure air. “This is one of the most frequent and powerful causes of the disease in question.” Cold, damp air is most favorable to its development. This is the reason why scrofulous affections are almost endemic in low places, “particularly with a northern aspect.” “They are more common in the north than in the south ;” are rarely seen under the tropics ; but are frequently met with on the shores of the sea, “and particularly, in England, among children that live in low, damp places.”

*Goitre*, which is a local affection, is endemic in mountainous countries. It has been remarked, that “the labor required in climbing up the mountains, the water of these places, and the cries of women in labor, favor the development of this disease.”

*Cretinism*, a general affection, which we regard as the highest degree of the scrofulous diathesis, and which is endemic in the deep valleys of the Tyrol, and the *Pays de vaud*, is visibly the effect of cold, humidity, privation of solar light, a highly carbonated atmosphere and perhaps, also, of a peculiar modification



of the atmosphere, which chemistry has not yet been able to detect. — *Dr. Hufeland on Scrofula.*

An inconstant and variable air is another fruitful source of scrofula, and this is the reason why it is more common in high, mountainous countries than in those more level, or slightly undulating.

An air highly charged with animal vapors or carbureted hydrogen gas, is very productive of scrofula. Hence, large manufactories and crowded cities are less wholesome, and produce more scrofulous cases, than the country. The higher the houses and the narrower the streets, the more unhealthy will be the city, and the more cases of scrofula will be found in it. "It is not possible to conceive of the whole influence of bad air in producing the strumous habit."

This influence is naturally enough explained, on the supposition of the suspended functions of the skin, the filthiness which follows the debility which results from it, and the absorption of the deleterious principles of the atmospheric air. "*Everything that will weaken the digestive powers will promote scrofula;*" such as acidity of the stomach, intestinal worms, the abuse of opium and other narcotics in childhood, want of exercise, want of cleanliness, abuse of heat or cold, precocious studies, too early exercise of the sexual organs, onanism, and great depression of spirits, &c.; all of which, by weakening the powers of digestion, aid in causing an imperfect chyle to be formed, and thereby assist in laying the foundation for a scrofulous disposition in the constitution.

Besides the remote causes, there are occasional exciting ones, such as a preternatural development of some parts of the body; "some particular seasons of the year, as the spring." — *Hufeland.* Mechanical causes, such as bruises, wounds, blows, falls, &c., will sometimes bring on this disease. *Hambleton* and *Weiber* have both given cases that were excited by causes of this kind.

It is also excited into action by diseases of irritation; and hence, we often see scrofula follow smallpox, measles, or scarlet fever. These diseases, if badly treated, as well as many other diseases, will often develop scrofula when it would otherwise have lain dormant. And here, perhaps, the physician or nurse should bear the blame.

We now come to treat of the external appearances of scrofula; and, in doing so, we shall avail ourselves of the ample experience

and clear elucidations of the physician to the king of Prussia, than whom no one has been more satisfactory on this subject.

*Of the external appearance of scrofula.* There is a habit and an external appearance connected with the scrofulous diathesis, that is almost inseparable from it. Where this appearance of the body is presented, no doubt as to the scrofulous taint can exist. The principal features of it are :

1. A short, thick neck.
2. Jaws rather broader and stronger than common.
3. The head rather large in proportion to the other parts of the body, especially the back part of the head.

4. Light-colored hair.

5. The face slightly bloated; its skin delicate, transparent, white, and somewhat rosy.

6. Most commonly, the eyes are blue, and the pupils large. This appearance often indicates a scrofulous state of the mesentery.

7. The upper lip very thick. This is one among the symptoms which do not mislead. It is, however, sometimes periodical.

8. The nose is often a little swelled, red and shining.

9. The whole body appears to be fat, and well nourished; but, on a close examination, the flesh is found to be flabby and soft. It does not possess the resistance and elasticity which indicate health and vigor.

10. The belly is somewhat larger than it ought to be, although it may not have become as hard as it will be in the future progress of the affection. Sometimes it becomes very large from the slightest cause. The following developments of the organs are irregular; as,

11. The development of the teeth, bones, and muscles. Learning to walk and talk, also, are either difficult, backward, or very irregular.

12. The intellectual faculties and organs of generation are prematurely developed. Such children are apt to become addicted to masturbation, and should be attended to on that subject. Girls in whom these symptoms exist require more attention from their mothers than those who are not of a scrofulous habit.

It is not an uncommon thing for a teacher or parent to be struck with an unusual manifestation of intellect in such children; but in a few years they arrive at their acme, and all efforts to push them further are vain.

The scrofulous taint shows itself even in the development of puberty. "Retarded and irregular menstruation often depends on no other cause."

Persons laboring under the scrofulous taint are apt to bleed at the nose frequently, and have frequent colds or coughs, with a wheezing respiration. "Small spontaneous ulcerations, peculiar to children, situated on the inside of the legs and thighs, and under the armpits, which do not yield to the ordinary measures of cleanliness, and small pimples of various forms and sizes, and scabby," are signs of scrofula. The body may enlarge in some parts more than others, and appear to be swelled, "but does not pit on pressure." This swelling is seen on the arms, legs, face, and scrotum, and this symptom should be particularly noted by the mother. Pains in the insides of the legs and thighs, subject to periodical returns, sometimes accompanied with more or less swelling for a few days, and a white discharge from the vagina of infants, are further signs.

There is also, in scrofulous habits, a manifest disposition to a sour stomach. The stools are variable; sometimes too solid, sometimes too liquid, and rarely of the right color and consistency.

The appetite is irregular, with a particular fondness for dry bread; mucous disorders of the bowels, flatulency, distension of the belly, wind in the bowels, spasms and colics, &c., also accompany the disease. These constitute a large majority, at least, of the second stage of symptoms of scrofula.

We have, however, besides the above symptoms, at different times, a peculiar form of fever, which, by some, has been called mesenteric fever, gastric fever, inward fever. These different forms of fever show nothing more nor less than that there is a scrofulous disposition in the system, though it may not yet be developed; and this peculiar form of fever, in its different variations, might more properly be called scrofulous fever. It generally appears in children under two years old, is very irregular, and its course and type are indefinite. It is various as to its duration, sometimes passing off in a few days, and, in other cases, continuing for several weeks, but in a mild form. The temperature of the body is not high, but the skin is sometimes manifestly too cold. There is sometimes attending it a slight cough, with wheezing. The belly is always a little swelled; and to these symptoms succeed glandular swellings, eruptions on the skin, scabs on the head, and emaciation of body.

This form seems to be the line of transit from a scrofulous taint or disposition to the development of scrofula.

We have now brought it to that point where it falls, in some degree, under the inspection of our senses. "Not only are the vital forces changed, but the organization of the glandular system is altered; its functions are disturbed, and the disease manifests itself plainly by the swelling of the lymphatic glands." At first, they are small and movable under the fingers; they feel elastic, and there is no discoloration of the skin.

The glands that first manifest this development of the disease are situated in the sides of the neck, under the lower jaw, and under the ears; and a particular examination of these glands will give the proper character of their affection. As above stated, they are at first small, loose, separate, and uninflamed; but, after a while,—for their progress to suppuration is very slow,—they gradually enlarge, and the swelling is communicated from one to another. The cellular tissue and sacs containing the glands thicken, and the tumor enlarges, till finally it becomes hard and immovable. The glands under the veins and in the groins swell in their turn; and, in some instances, those of the whole body swell.

It is uncommon for a single gland to be affected in scrofula. The virus will extend from gland to gland, in the same region, till several are affected by it; and they are often so connected together as to make an enormous tumor. At length the disease, in passing from gland to gland, affects the lymphatic vessels, which become thick and hard, and feel like hard cords passing from one gland to another.

These tumors are variable; they sometimes rise and diminish alternately for a long time, while in other cases they enlarge, and remain so for years, before they suppurate. "In proportion as the scrofulous taint increases, the tumors become hard and immovable;" yet they may feel cold and indolent; but, sooner or later, the gland inflames, and suppuration takes place slowly. When the pus is discharged, it is of an unhealthy character, mixed with curds, and, in some instances, with thin, hard, white flakes, or concretions, not unlike small pieces of an egg-shell. "In other cases, the swelling passes into a schirrous and even an osseous state."

In some cases, the lymphatic glands acquire an enormous size; they have been seen to weigh "ten pounds and more." We suppose, in these cases, that the tumor had changed its



scrofulous character, for that of a steatomatous tumor, though the scrofulous blemish or hue may still remain upon them.

In some cases, the whole body is covered with scrofula; that is, tumors and sores appear on every part of the body.

The external surface is not the only part affected by scrofula; the fat and glands of the bowels become the seat of the disease, also. The fat of the bowels, stomach, and chest, in these cases, is studded with tumors, from the size of a small pea to that of a walnut. This, we can readily see, obstructs the due process of chyfication and mesenteric functional nutrition, and the patient becomes extremely emaciated, and dies from starvation. This is what is called, by writers on the diseases of children, *tubes mesentericus*; which is nothing more nor less than scrofula.

The heart, brain and liver, in their turn, become affected with this disease; but, in adults, the most common of all its determinations is the lungs. Here it shows itself in the form of tubercular consumption; which, though it may be warded off for years, will ultimately prove fatal.

Scrofulous children rarely have a clean head. They are liable to have small pustules and oozing sores on the back of the neck, which emit an unpleasant smell. Sometimes these sores terminate in real scald-head. These children are apt to have sore eyes, which are difficult to cure. The glands of the eyelids pour out a viscous humor, denominated by *Scarpa*, "palpebral flux." The eyelids, in the morning, are glued together, and are separated with difficulty. The sight is frequently weakened, and, in some cases, the *cornea*, or black part of the eye, becomes diseased and turns white; in which case, vision is destroyed.

Such children frequently have styes on their eyelids, and their ears are apt to discharge an ichorous, thin, fetid humor.

In consequence of the disease of the mesenteric glands, the belly enlarges and becomes hard, while the legs and arms fall away, till the skin may be wrapped around them like a piece of cloth. The skin shrivels, looks dead, and feels harsh.

All scrofulous ulcers are not preceded by swelling of the glands, for some of them seem to be developed spontaneously, in consequence of a lesion of the lymphatic system. These sores present a foul appearance, the matter formed in them never being of the healthy kind; it is clear, watery, and very irritating. They heal in one place, and break out in another; they are not very painful, but are obstinate to heal, and tend to perpetuate themselves almost without end.



*Goitre*, as stated in the foregoing part of this chapter, is a form of scrofulous swelling of the strumous character. This swelling is situated exclusively in the *thyroid gland*, which lies across the neck, from side to side of the larynx, and enlarges, in some cases, to the weight of ten or fifteen pounds, when it may produce death by suffocation, or, by obstructing the return of blood from the brain, cause an engorgement in that organ, terminating in apoplexy and death. We are ready, however, to acknowledge that *goitre* is not always of a scrofulous origin, but is frequently the product of situation, as in mountainous countries, where it is endemic; depending, probably, on the qualities of the air and water, combined with other circumstances peculiar to such locations.

To conclude these remarks, we will simply say, that scrofula terminates in disorganization, sooner or later, if not cured before it arrives at that point. The manifestations, then, of disorganization are, *First*, a wasting away of the whole body and limbs, from mesenteric disease. *Second*, white swellings in the joints. *Third*, spontaneous dislocation of the joints. *Fourth*, suppurations of the glands in different parts of the body. *Fifth*, ulcerations on the surface, and about the eyes, head, and ears. *Sixth*, scrofulous dropsies. *Seventh*, tubercular consumption, and enlargements of the bones, caries, and spina-bifida. *Eighth*, scrofulous cancer. *Ninth*, *tuberc abdominalis*, or abdominal consumption. *Tenth*, rickets. *Eleventh*, a peculiar affection of the nervous system, such as spasms, cramps, paralysis, or palsy, supervening upon, and caused by, the retrocession of scrofulous matter from one part to another. *Twelfth*, *cretinism*, which, perhaps, is the highest grade of the strumous constitution. In this case, the whole body or system is scrofulous.

We might write a volume on scrofula, but here we must conclude; the importance of the subject being our only apology for the length of this description of the disease, — a disease than which there is no other so full of importance to the human family. The fond father, the loving mother, the tender, innocent infant, who has had no part in bringing itself into the world, and into this state of suffering, — the general and individual prosperity, happiness, and peace of society, — all call aloud upon parents to examine this subject closely, understand it well, and assiduously avoid the causes which produce it.

We do not intend to carry this subject, in this chapter, into the open and ulcerative form of this disease, as we shall treat of it

again, under the name of king's evil, after it has broken out, and become open, in an ulcerative form, in the glandular system

We shall now give the treatment of scrofula, following it through all the stages in which we have, in our previous remarks, treated of it.

TREATMENT.—From what we have said concerning the nature and causes of scrofula, it will be readily observed, that some particular arrangement must be adopted for the use of the remedies to be resorted to for its cure. The treatment rests, therefore, on the following indications :

*First.* To withdraw the patient from under the influence of the scrofulous predisposition, or predisposing causes ; for it is impossible to perform a cure while these causes continue to act.

*Second.* To elevate the tone of the lymphatic system, which is evidently the seat of scrofula. This is certainly the fundamental basis of the treatment ; and whatever other remedies may be introduced, according to circumstances, this fact never should be lost sight of.

The first is done by a pure air, light and sunshine, proper diet, suitable baths, &c. The second, by antimonials, mercurials, tonics, aperients, anti-spasmodics and stimulants, externally and internally applied.

As the lymphatic system is the seat of scrofula, and that system of vessels, at least the thoracic part of it, is the medium through which the whole system is supported, it will be readily seen, that the diet from which the lacteals are to separate the nourishment from the food, and carry it to the general circulation, should be pure, and properly adapted to the indications in question. If a proper diet is used, and a pure and wholesome chyle is formed, the scrofulous predisposition will often be entirely eradicated from the system. The food, then, should be light, easy of digestion, and incapable of producing acidities, or weakening the stomach. Vegetable ought to be combined with animal substances, as soon as the child has teeth to chew them. The vegetables should always be fresh ; roots should be well cooked ; broths made of herbs, and lean meats, which are easy of digestion ; these being the most suitable aliments for scrofulous patients.

For drink, plain water, pure and fresh, is the best. A pure air is essential ; for “as long as scrofulous patients inhabit low and damp places, their state only grows worse and worse ;” as, in such situations, the air is always impure.

Exercise in the pure open air, on dry grass, is essential to the removing of the scrofulous taint in children; they should sleep in a large, well-ventilated room, that admits a full light, with but few beds in the same room. Parents and instructors should keep these things in view, and not lay the foundation of an incurable scrofula before the child can act for itself.

Bodily exercise is also important in removing the predisposition to scrofula. If a child, from the period at which he learns to walk, spends the greatest part of his time in the open air, he is rarely affected with scrofula; and even if his parents have some of its taints in their system, its attack upon him is by the above means the more easily warded off. This exercise should be performed by the child itself, by running, walking, tumbling, &c. It should, however, be taken in dry, wholesome places, and in the shade. Passive exercise,—that is, riding in little wagons, or being drawn about on chairs,—is not of much avail in these cases. The child must use its own strength when it is able to do it; for this gives tone to the system, and scatters any tumors that may be disposed to form in the glands of the lymphatic system.

Cleanliness is also important. The skin should be kept clean, as well as the body linen. The bedding should be kept clean, and frequently changed. Physicians often forget this important fact.

Scrofulous children ought to sleep on mattresses, and not on feather-beds. The mattress should be refilled every spring and fall, or oftener.

Bathing is of the greatest importance to children in the treatment of scrofula. Baths have the happy effect of facilitating absorption and exhalation; they enliven the sensibilities of the skin, establish an equilibrium of action in the circulating system, soothe excessive irritation, regulate the functions of the lymphatic system, and remove engorgements of the glands. Children who have been properly bathed rarely have glandular swellings. The bath is even proper when scrofula is in full vigor. Baths also constitute a valuable means for the application of remedies in scrofula, as we shall see before we close this part of the chapter.

Both parents and physicians are apt to become weary in the treatment of this disease; but let it be remembered that no disease requires more patient perseverance in its treatment than scrofula. There are many cases that require, not only weeks,

but months, to effect a cure. The system itself, when it is kept in a proper condition, and the lymphatic system held, as it were, in the proper attitude, will, by a continued development of itself, at last lose all the scrofulous disposition, and, like a bird, having become full-fledged and strong-winged, rise above all its former defects and weaknesses, and health and vigor crown the untired efforts of a fond parent or a persevering physician.

The spring of the year is, without contradiction, the most favorable time for combating the scrofulous diathesis of the system. The lymphatic system, as well as the entire body, experiences, at this season, an increase of vitality; the diet can be better regulated, and vegetables are never so fresh and invigorating as in the spring, when scrofulous persons can derive much benefit from their juices.

We should never mistake the suppression of a glandular tumor for the cure of the scrofulous disease.

Scrofula, which has so many causes for its existence, cannot be cured by any one remedy. In all cases, the constitution must be revolutionized, in order to effect a cure. Nevertheless, there are certain remedies which seem to possess specific virtues for certain symptoms and certain developments of the disease; but, in order to obtain success in scrofula, we must attend to its complications, and to the different temperaments of the subjects of it. If this be neglected, the cure will be retarded, or the disease not cured; and this will show the necessity for varying the remedies according to circumstances. If we forget that the lymphatic system is the seat of scrofula, and lose sight of this fact in the treatment of the disease, we shall most assuredly fail to perform a cure.

We have now given a sketch of the facts necessary to be known and followed, in order to the successful treatment of scrofula; we shall next speak of the particular remedies, in their order; and first, of emetics.

Emetics deserve a distinguished place in the treatment of scrofula, always exciting, as they do, an increased action in the lymphatic system. They, therefore, do good in this way, as well as in cleansing the stomach and large secreting organs, such as the liver, pancreatic gland, &c. Emetics, then, should be repeated frequently during the cure of scrofula.

*Recipe*: Antimonial Wine, one ounce.

To a child two years old, give first a tea spoonful, and repeat half the quantity every fifteen minutes, till it pukes freely, when

warm water should be given every time the child pukes, till it has three or four motions up. It must then be turned down, with a little gruel, or salt and water, but nothing cold must be taken till the operation is over. The bowels should then be acted on with the following medicines :

*Recipe :* Calomel, six grains.  
Pulv. Rhubarb, twelve grains.

Mix, and divide into six papers; give one every three hours, till the bowels are freely evacuated. This purgative may be repeated in a few days. Where the belly is large and the bowels costive, the following medicine may be given :

*Recipe :* Scammony,  
Aloes Socot.,  
Pulv. Rhubarb,  
Castile Soap, — of each thirty grains.  
Best Ground Ginger, five grains.

Mix in ten papers. Give one of these every night at bedtime, so that they may operate in the morning; and, if they should fail to do so, a powder may then be given. In the morning, should vomiting come on in scrofula, which is frequently the case, the following celebrated remedy of Hufeland will be found valuable :

*Recipe :* Tincture of Orange Peel, half ounce.  
Tincture of Aloes, two drachms.  
Tincture of Castor, two drachms.

Mix, and give fifty drops three or four times a day, in water. Sometimes the abdomen swells, and continues hard for a long time; the skin becomes of a bad color, the glands swell, and in these cases there is some cough. After these symptoms last for some time, a slow fever comes on, the cough increases, and the child is apt to vomit occasionally. For this state of things, we will also give Dr. Hufeland's remedy.

*Recipe :* Klein Elixir, half ounce.  
Aperient Elixir, three drachms.  
Tincture Rhubarb, three drachms.  
Huxham's Antimonial Wine, two drachms.  
Extract of Cinta, one drachm.  
Extract of Dulcimara, one drachm.  
Essence of Orange Peel, one and a half drachms.

Mix them all together, and give sixty drops four times a day, in an infusion of dandelion, yarrow, saponaria and bitter-sweet. This he gives to a child eight years old; and he states that the use of this remedy for three or four weeks, cured the scrofula, where the symptoms were dangerous. Indeed, this is the doctor's favorite remedy in scrofula of children.



For the symptoms for which the celebrated Russian physician gave the above, we have generally succeeded with the following medicines :

*Recipe :* Pulv. Rhubarb,  
Aloes Socot.,  
Scammony, Aleppo,  
Castile Soap, — of each, twenty grains.  
Tartar Emetic, three grains.  
White East India Ginger, four grains.

Mix all into twenty-four powders, and give one, night and morning, in sirup. At the same time, let the little patient drink a weak tea, made of the bitter-sweet, or dandelion root, with a tea spoonful of the supercarbonate of soda dissolved in a pint of it. A half-pint should be drunk every twenty-four hours.

Once in a week, the patient should take the following purgative :

*Recipe :* Calomel, six grains.  
Jalap, four grains.

Mix in two papers, and give them three hours apart, in sirup. A tea spoonful of hyssop in powder may be given every morning, when there is much pain in the head. A pinch of snuff occasionally will be of service.

Where the scrofulous eruption is dry and scaly, resembling tenea, or scald-head, whether it be in the hair, or in the arms, legs, or body, the following will be found very profitable in its treatment, for a child six years old :

*Recipe :* Antimony, in Powders, one drachm.  
Prepared Chalk, two drachms.  
Pulv. Canilla Alba, two drachms.  
White Sugar, one ounce.

Mix, and divide into ten papers ; give one three times a day, in a little water. When these are all out, the same may be prepared, and given five times in twenty-four hours, and continued for three weeks. During this time, the diet should be free from grease, and the drink should be a weak decoction of the bitter-sweet. The patient may also take a sulphur bath every other day. During the use of this remedy, great care should be taken to keep from taking cold ; and if symptoms of much debility should come on, the following tonic should be given :

*Recipe :* Huxham's Tincture, one ounce.  
Tincture Iron, two drachms.

Mix, and give to a child two years old, forty drops three times a day, in the drink.

Under this treatment, in five or six weeks, all the symptoms of ulceration and enlarged glands will generally give way.

But there are still other forms of scrofulous affections; to wit, those that arise from a venereal taint in one or both of the parents. These manifest themselves by symptoms from different parts, as the ears, the vagina, indurations on the shallow bones, mesenteric derangements, &c; and here we are compelled to use a different course of treatment. In this form of scrofula, mercury, in some form or other, is our best remedy. The following may be given, for a child two years old :

*Recipe :* Blue Mass, twenty grains.  
Pulv. Rhubarb, ten grains.

Mix in four papers, and give one, night and morning, in sirup. These may be repeated for one week; then omitted for the same time, and the following may be given :

*Recipe :* Pulv. Rhubarb, ten grain.  
Castile Soap, ten grains.

Mix in four papers, and give one every night at bedtime, in sirup. The child, during the time of taking this medicine, should take some tonic, such as

*Recipe :* Huxham's Tincture, one ounce.

Twenty drops of which may be taken three or four times a day.

It should be recollected that mercury should never be carried so far in a child as to produce salivation. When the mercury is discontinued, the following should be given :

*Recipe :* Hydriodate of Potash, half drachm.  
Distilled Water, one ounce.  
Compound Spts. Lavender, one drachm.

Mix, and give thirty drops, in sweetened water. three times a day.

It will be found, in many cases, that the tumors or enlargement of the abdomen, will require a stimulating liniment, from the use of which much benefit is derived.

We have not met with a better article for this purpose than one prepared by my son, *J. Milton Bright*, which he calls "Bright's Rheumatic Liniment." This liniment, rubbed on the glands that are swollen, twice a day, and then washed off with soap, vinegar and warm water, before applying it the third time, is superior to anything else of the kind we have ever seen. The abdomen may also be rubbed with it when there is much enlargement; but should this liniment not be convenient, you may use the following :

*Recipe :* Basilicon Ointment, half ounce.  
Olive Oil, half ounce.  
Beef's Gall, fresh, two drachms.  
Venice Soap, two drachms.  
Rock Oil, two drachms.  
Carbonate Ammonia, two drachms.  
Gum Camphor, one drachm.

Mix these articles perfectly, and anoint the abdomen and the tumors with the mixture, twice a day, washing it off clean, every time, with warm soap suds, before it is reäpplied. Perseverance will effect a great deal; therefore, use these remedies faithfully for several weeks, before you desist.

Mercury, like all other medicines, loses its effect sometimes, by a long continuance in one form. It will then be necessary to change it occasionally, and give calomel instead of blue mass.

*Recipe :* Calomel, sixteen grains.  
Pulv. Rhubarb, ten grains.

Mix in eight papers, one of which may be given night and morning, or one at night and a tea spoonful of castor-oil in the morning.

The sulphur bath, occasionally, while these medicines are used, will be of service.

Lime-water is a good remedy where the bowels are apt to be costive. A tea spoonful may be given, in milk, three or four times a day, with great advantage.

Scrofula cannot be cured without tonics. There is, however, a proper time for their use in this, as in other diseases; and in scrofula this time is after the lymphatic system has been relieved from all its engorgements, and the passive or chronic inflammation has been removed from the glands and facia that surround them. A state of debility always ensues to the removal of that state of the parts; and this is the time to introduce tonics. Even at this time, there must be some caution used, to prevent a second engorgement of the coats of the lymphatics, as well as the glands.

The best form of a tonic, then, is that combined with such medicines as will prevent the above engorgements from taking place; and the following is an excellent preparation. This, however, should not be given, till the fluids have been purified, and the glands begin to be reduced.

*Recipe :* Peruvian Bark, one ounce.  
Bitter-Sweet, one ounce.  
Dandelion Root, half ounce.

Boil the two last in a quart of water, for fifteen minutes; strain off, and add the bark to the decoction, and boil again for six minutes. Strain again; and add to the decoction, after straining the second time,

*Recipe*: Hydriodate Potash, two drachms.

Stir it till it is all dissolved, and add of good port wine, half a pint; let all cool, and bottle it close for use. Keep it in a cool place, and, to a child two years old, give a dessert spoonful, three times a day, and so in proportion to age, till you come to a grown person, who can take a small stem glassful three times a day.

During the time this medicine is given, the following may be used, to keep the bowels regular, and take off any bad humors that may be set at liberty in the lymphatic system:

*Recipe*: Scammony,  
Aloes Socot.,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Pulv. Ginger, ten grains.  
Tartar Emetic, two grains.

Form twenty-four pills, of which, from one to four may be taken every night at bedtime, according to the age of the patient, and the effect they produce—one operation every morning being enough.

It will be found necessary to continue this course for several weeks, and, perhaps, months; at the same time, if there are any glands that are enlarged, or any sores on the skin, they should be rubbed or dressed with the following liniment:

*Recipe*: Basilicon Ointment, half ounce.  
Olive Oil, half ounce.  
Beef's Gall, two drachms.  
Venice Soap, two drachms.  
Rock Oil, two drachms.  
Carbonate Ammonia, one drachm  
Gum Camphor, one drachm.

Mix them perfectly, and dress the sores, or rub the enlarged glands, with this ointment, twice a day. If the abdomen is much enlarged, it should be rubbed with the above liniment twice a day, also; and the skin should always be well washed with soap and warm water, before the liniment is reappplied.

At this time, the diet should be more generous; that is, it should be composed not only of new, sweet vegetables, but a little lamb, fresh beef, or some wild meat, which, however, must be well cooked.

We meet with cases where the debility becomes so extreme, that the ordinary tonics seem not to arouse the energies of the system; and we should then give the following:

*Recipe*: Huxham's Tincture, two ounces,  
Volatile Tincture Guaiacum, half ounce.

Mix, and give a tea spoonful three or four times a day; or,

*Recipe*: Compound Tincture Gentian, half ounce.  
Tincture of Iron, half ounce.

Mix, and give thirty drops four or five times a day, in a stem glass of dandelion tea, or a tea made of the tops of camomile.

Such are the varieties in which scrofula presents itself, that it is difficult to set them all forth in one chapter. There is another form, however, which we shall mention, in which scrofula appears in small children from one to two years old. They appear to be rickety; they cannot stand on their feet; the glands swell more or less; the belly becomes tumid, and great debility ensues; the joints, after a while, swell; and the bowels are irregular. For this form of the disease, the following medicine will be found valuable:

*Recipe*: Decoction of Bark, half pint.  
Orange Peel, two drachms.  
Mace, Pulv., two drachms.  
Madeira Wine, one pint.

Add the materials to the wine, and give a spoonful three times a day.

The body should be kept very clean, by the use of the cool salt bath every day.

By perseverance in this treatment, in a few months, the disease may be eradicated from the system; but while continuing the use of the above medicines, the bowels should be kept open with,

*Recipe*: Rhubarb, twenty grains.  
Blue Mass, ten grains.

Mix; divide into ten powders, and give one, morning and evening, in sirup.

There is another form of scrofula, which does not affect the glands much, but shows itself on the skin, in dry, ill-conditioned sores, of a leprous appearance. The sores are apt to heal, and run a fetid and rather ichorous humor. The countenance of such persons is morose; and if the subject of it be a female, she is almost deaf when she menstruates, if both ears should be affected. This is evidently a disease of a scrofulous character.

For the cure of this form of the scrofulous disease, *Dr. Hufe-*



*land* prescribes “a draft of Scidlitz-water every morning; a scarification and cups to be applied to the back of the neck once a month; mercurial frictions applied behind the ears; a decoction of bark for her drink; and a blister on each arm.” This, he says, will cure this form of scrofula in a few months.

The scrofulous affection is not confined to any one part of the system, but may break out on the feet, legs, arms, hands, head, or backbone, as well as in the soft parts. Where the bones are affected promiscuously, much good has been derived from the use of *Piderit's* celebrated remedy, which is,

*Recipe* : Corrosive Sublimate, six grains.  
Spirits of Wine, two ounces.

Mix and dissolve. Then take,

*Recipe* : White Sugar, four ounces.  
Pure Water, six ounces.

Dissolve the sugar in the water, by simmering till a perfect sirup is formed, and then add the previous prescription. Mix them well; and, of this preparation, give a tea spoonful three times a day. At the same time, the patient should take the following decoction :

*Recipe* : Guaiacum Wood, one ounce.  
Bitter-Sweet Twigs, one ounce.  
Pine Cores, one ounce.

Make all fine, and boil in two quarts of water, down to one quart. A small wine glassful three times a day is sufficient for a grown person. If the feet or other parts are ulcerated, a strong decoction of willow bark should be made, and the sores well bathed in it every day, and cloths wet in the decoction should be kept constantly applied to the sores. After a few weeks, a strong decoction of bark may be given, combined with an alkali.

*Recipe* : Peruvian Bark, two ounces.

Boil for eight minutes, in one quart of water; add a little cold water, and, when settled, pour it off, and add,

*Recipe* : Hydriodate Potash, two drachms.

Mix well, and take a table spoonful every three hours, and the cure may be expected in a few weeks.

There is a particular condition of the system in which iron is admissible in scrofula, as where the system is very much relaxed, the scrofulous tumors soft, the skin flabby, &c. In such patients, great good may be effected by the judicious use of iron. The best form of administration is in substance :

*Recipe* : Carbonate of Iron, forty grains.  
Ext. of Liquorice, twenty grains.

Mix in twenty powders, and give one, morning and evening, in sirup, for a child two years old; the dose may be increased or diminished, according to age.

If any fever should exist, and, at the same time, great debility and relaxation should demand the use of iron, the following formula may be used :

*Recipe* : Carbonate of Iron, forty grains.  
Salts Tartar, forty grains.

Mix, and divide into twenty papers; give one twice a day, as above.

The bitter-sweet is an invaluable medicine in scrofula. When used as an alterative for the lymphatic system, it should be prepared in the following way : 'Take of the twigs of the vine, *half an ounce* ; of water, one pint; boil the twigs in the water for fifteen minutes; then pour it off, and sweeten. This quantity should be taken, by a grown person, in a day. After it has been used of this strength for several days, the quantity of the herb should be increased, and taken daily, till it produces a vertigo, or giddiness in the head, when it may be discontinued for a few days, and then resumed again, as at first.

The dandelion may be used in the following way : 'Take of the fresh root, half an ounce, and boil it in one quart of water; strain and sweeten; this quantity may be taken daily by a grown person. The above decoctions should be used when the swellings are hard, the belly tumid, and the joints enlarged.

Anodynes are useful in scrofula, when there is much pain; and small doses of opium or hyoscyamus may be given at bedtime, to produce rest.

The diet of scrofulous persons is of very great importance. Vegetables should compose four fifths of the food, especially in the spring of the year. Light fresh meats, and stale bread, with but very little butter, should be used; and, in the heat of summer, pure milk, — with lime-water, one ounce to the pint of milk, — and bread, and well-cooked farinaceous vegetables. But, above every other diet, a coffee made of acorns is to be preferred. The kernel of the acorn should be browned like other coffee, ground, and prepared in the same way, and used with milk and sugar. It is a grateful article of diet, very nutritious, and of itself, in many cases, a sovereign remedy for scrofula. Patients living on acorn coffee

always become fat, and have a fine color, clear skin, and good complexion.

Exercise in the open air is of essential importance to scrofulous patients.

#### OF GOITRE.

This is a species of scrofula. Its seat is in the thyroid gland, but women alone are subject to it. It has been referred to various causes, such as the peculiarity of the air in high, mountainous countries, the quality of the water in such situations, hard labor, scrofulous disposition of the system, the smoke of bituminous stone coal, &c.

The swelling commences without fever, and the first thing that is generally observed is the enlargement of the gland which lies across the front of the neck. This gland is in the shape of a pair of travelling saddle-bags, and hence the swelling is largest at the ends; but sometimes only one end swells.

There is a slight soreness when the gland is squeezed, but, in general, no constitutional derangement. If taken in time, it is easily cured. The remedies are the following: first,

*Recipe:* Blue Mass, twenty grains.  
Pulv. Rhubarb, ten grains.  
Aloes Socot., ten grains.

Form eight pills, and take four at bedtime and four in the morning. After they are worked off properly, take the following:

*Recipe:* Scammony, twenty grains.  
Aloes Socot., twenty grains.  
Pulv. Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills, and take from two to four of them every night at bedtime, or just as many as will operate once or twice the next morning. The system must be kept under their influence.

The following must be rubbed on the gland, morning and evening, in small portions:

*Recipe:* Iodine, Pulv., twenty grains.  
Hog's Lard, one ounce.

Mix them properly, and apply with the finger, by gentle friction.

A flannel should be kept constantly around the neck in winter and a piece of silk in the summer. Perseverance in the use of these remedies for a few weeks, will cure the goitre. We have

never failed, where they were used within six months after the first appearance of the swelling, to remove it in from thirty to forty days, and, in some instances, even in twenty days.

The diet, all the time, should be vegetables, or milk and bread.

When the swelling is all removed, the following pill should be taken :

*Recipe* : Carbonate Iron, two drachms.  
Subcarbonate Soda, one and a half drachms.

Form sixty pills, and give one three times a day. Exercise in the pure open air should be freely taken.

That the public may have the practice of others in this disease, we here insert, as the best we have seen, Dr. Hufeland's practice entire, for goitre. He says : " I begin by purging the patient ; after which, I make him take, morning and evening, a powder composed of,

*Recipe* : Burnt Sponge, one drachm.  
Prepared Eggshells, ten grains.  
Ethiops Mineral, ten grains.  
Ol. Sweet Aniseseed, twenty grains.

" Mix, and reduce them to a very fine powder. This portion is to be taken morning and evening. I purge the patient once a week with calomel. I put flannel about the neck, and order friction of the part, morning and evening, with camphorated volatile liniment ; sometimes with hare's grease, which is a very good resolvent. Such is the plan under the administration of which I have seen considerable goitres disappear in two or three weeks. If the patient is very weak, or if he has weak lungs, I prefer that he should take the sponge ley—(which is prepared from sponge ashes.) When the burnt sponge produces no good effect, we must resort to the muriate of *Byrates*. This substance has produced very good effects when the other has been of no avail." He also gives soap pills.

This treatment, we conceive, possesses no advantage over our own, and is much more complicated and difficult to prepare, and disagreeable to follow. Upon the whole, we greatly prefer our own method of treating the disease, and can assure our readers that they will generally find it successful.

#### KING'S-EVIL.

King's-evil is evidently a scrofulous disease ; it is, indeed, nothing more nor less than scrofula in its eruptive stage ; and, therefore, we shall neither enter into a full description of it here,

nor go back and trace it through all its various modifications. For these things, we refer the reader to what is said under the head of *Scrofula*, where this subject is as fully discussed as the design of this work will allow.

We say, then, that king's-evil is the eruptive stage of scrofula; and, as it is a disease of the lymphatic system, we should naturally look for it to break out in the glands. "The first tumors we meet with are," therefore, "upon the sides of the neck, below the ears, or under the chin, confined to the lymphatic glands in those parts," and only spreading to glands under the arms, when the disease is far advanced. At first the tumors are only two or three in number; they are movable, soft, and slightly elastic, without discoloration or pain. They may continue in this state for a year or two, before they suppurate; before which, they become larger and more fixed, and turn of a purplish color. At length they soften, and a feeling of fluctuation may be detected; the skin becomes paler on the surface; they break, and pour forth a fluid like impure pus, which at length assumes a curd-like appearance.

After they have discharged for many months, the sores heal, and other glands swell and suppurate in like manner. We have seen discharged from these glands a crustaceous substance, like thin eggshells, in pieces as large as a five-cent piece, not unlike those conerctions that come from the feet of persons who have long suffered from the gout, except that they are of a much thinner, lamellated structure.

The spring of the year is the season in which these glands are most apt to swell and increase in number. If they should heal after running for years, the scar that is left is of an uneven surface, puckered around the edges, and a purplish color.

After the disease has been for a longer or shorter time in the neck, other parts of the system will become affected by it, as the joints of the long bones, or the bones themselves. If the long bones become affected, they are apt, after risings in the flesh, and a long discharge of ill-conditioned pus, to throw off scales from the bones; or the bones become rotten, and break, or burst and split to pieces, as we have seen in more than one instance.

If the disease should settle in a joint, it will swell, and the integuments become hard and stiff; the bone, finally, becomes diseased, the skin breaks in holes, and a sanious fluid is discharged. The bone at length becomes cancellated or pervious, full of holes like a honey-comb, and is twice or thrice its natural



size. In this form, the disease is closely allied to white swelling, though capable of being distinguished from it by the cancellation of the bones.

If the eruptive stage of scrofula should show itself in the eyes, the lids will be inflamed and turned outwards, and the eyes will be closed by a glutinous matter, in the morning, which prevents them from being opened, till they are freely bathed with warm water. This secretion from the eyelids is so erosive that it excoriates the cheeks, and causes them to ulcerate wherever it rests upon them.

The eye is not unfrequently put out by scrofulous inflammation and suppuration. In the worst stages of the disease, the entire system becomes affected; hectic fever ensues, and sometimes tubercular consumption, which closes the mournful scene.

In attending to the cure of *king's-evil*, we must keep in mind the principle laid down in the cure of scrofula,—that the lymphatic system is the seat of the disease, and that this system is always in a state of debility, and is circulating an unwholesome fluid. To purify the fluids, the blood and the lymph, is, therefore, a desideratum in the cure of king's-evil. For this purpose, give the following pills:

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Pulv. Jalap,  
Castile Soap,  
Extract Butternut, — of each twenty grains.

Form twenty-four pills, and give from two to four of these every night, or just as many as will operate once or twice the next morning. Or you may use the following:

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Give these as above, so as to procure one or two operations the next morning. By the constant use of these pills, the fluids will be so perfectly purified that the ulcers will readily heal with the use of the following ointment.

We have often cured king's-evil, in its inveterate stage, by the use of the above pills, and the following liniment :

*Recipe :* Basilicon Ointment, one ounce.  
Olive Oil, one ounce.  
Beef's Gall, fresh, half ounce.  
Venice Soap, half ounce.  
Rock Oil, half ounce.  
Pulv. Camphor, two drachms.  
Carbonate Ammonia, one drachm.

Mix them properly, and dress the sores with this, morning and evening. The bitter-sweet may be used, as in scrofula.

The diet must, in every case, be vegetable entirely. Acorn coffee is the best. All kinds of fresh vegetables may be used, but neither butter, fish, flesh, nor fowl.

Exercise in the pure open air must be taken from three to six months. Perseverance in this course will cure any case of king's-evil, if the constitution is not broken down.

It will be proper for all scrofulous or king's-evil patients to take the above pills two or three weeks every spring, for two or three springs, and live on a vegetable diet for the same length of time, in order to prevent any latent sparks of the disease awakening, if such should be left; in this way the disease may be eradicated from the system.

After all the sores are healed, if the disease is all removed from the system, the scars will look white and smooth, and as soft as silk; but if any remains of the disease be lurking behind, the scars will look red or purple.

#### DISEASED EYELIDS, OR WILD HAIRS IN THE EYES.

It would seem, at first thought, that it would be useless to write a chapter on this subject; but when we recollect how many beautiful girls have been disfigured forever by neglecting this disease, we think it worthy of our notice, and the attention of mothers.

Wild hairs in the eyes, as they are called, are nothing more than the natural eyelashes, which have become diseased, as a consequence of the deranged condition of the small glands in which they are rooted. This deranged condition, or disease, of these glands, is frequently of scrofulous origin, but it also occurs where no scrofulous taint can be detected in the system. Exposure to severe cold may produce it. The edges of the eyelids are frequently inflamed, and secrete a sebaceous fluid,

by which they seem to be glued together in the morning. The eyelids are apt to have styes on them, which suppurate slowly, and are apt to leave hard lumps, which remain for some time. Taking the whole together, the eye becomes ultimately very unsightly.

TREATMENT.—The eyelids should be washed with milk and water, or sugar of lead and water.

*Recipe* : Sugar of Lead, two grains.  
Rain-Water, one ounce.  
Laudanum, twenty drops.

Mix, and wash the eyes with this three or four times a day, till the inflammation is pretty well removed, when, by examination, some of the eyelashes will be found thick and stiff. These must be removed with a pair of fine-pointed tweezers; and by a slight pull they will slip out, but cause no pain. The roots of the diseased hair are black; but, by close examination, the edges of the eyelids will be found to look blue where these hairs grow. Every hair of this description should be taken out. The eyelids should then be anointed with the following salve :

*Recipe* : Ungt. Mercury, half ounce.  
Vermilion, ten grains.

Mix into a salve, and anoint the eyes twice a day with it, or, at least, every night at bedtime, till the redness and swelling are all removed.

At the same time, the bowels should be kept open with some light purgative. If a child's eyes are diseased, the medicine may be,

*Recipe* : Magnesia, one drachm.  
Cream of Tartar, twenty grains.

Mix in six powders, one of which may be given every night at bedtime, in sweetened water. If it be a grown person whose eyes are affected, the following pills may be taken :

*Recipe* : Blue Mass, forty grains.  
Aloes Socotrine, twenty grains.  
Pulv. Rhubarb, twenty grains.

Form twenty pills, three or four of which may be taken at bedtime every night.

The diet should be light, and mostly vegetable.

If the patient is very weakly, a tonic may be given.

*Recipe* : Huxham's Tincture, two ounces.

Take a tea spoonful, in water, three times a day. A child may take twenty drops three times a day.

#### OF THE BITES OF INSECTS, AS MOSQUITOS, SPIDERS, ETC.

It may be thought, by those who have never been annoyed by mosquitos, that this little chapter is unnecessary; but those mothers who have had their children thrown into fever by the bite of this insect will certainly think otherwise.

Not only do they produce fever and great irritation in the circulation, but ulceration and soreness of the skin. The bite is certainly poisonous.

**TREATMENT.**—The parts bitten should be well bathed with spirits of camphor, spirits of turpentine, or some other stimulating embrocation; and the following will be found an excellent preparation for that purpose :

*Recipe :* Spirits Camphor, two ounces.  
Spirits Hartshorn, two ounces.  
Laudanum, one ounce.

Mix, and touch the bites as soon as any pain is felt after the sting; or the following may be used profitably :

*Recipe :* Strong Vinegar, one pint.  
Gum Camphor, half ounce.

Dissolve the camphor in the vinegar, and touch the parts with it as soon as bitten.

The bites of mosquitos, chiggers, ticks, flies, or bed-bugs, as well as the stings of bees, hornets, wasps, and such insects, may be relieved by the above remedies.

#### BRUISES.

Children are very liable to be bruised; they will climb and venture into dangerous places, and hence they frequently receive severe bruises in their flesh.

When the skin is not broken, but so much bruised as to cause an extravasation of blood, which is known by the parts becoming blue or black, the best application is that which will relieve pain and cause the absorbents to take up the extravasated blood. For this purpose, use the following liniment :

*Recipe :* Spirits Camphor, half ounce.  
Olive Oil, half ounce.  
Laudanum, half ounce.

Mix them together, and apply freely to the bruised parts. The

application may be renewed frequently, till the discoloration is removed. Or the following may be tried :

*Recipe* : Turlington's Balsam, one bottle.

Apply this, in small portions, frequently, till the desired effect is obtained. The oil of spike is good.

If the parts are disposed, from excessive contusion, to inflame and suppurate, a poultice of slippery-elm bark, or a light bread and milk poultice, renewed every three or four hours, will be very beneficial.

Bandaging, after the inflammation is all removed, will be of service ; but the parts must be kept perfectly at rest.

#### OF STRAINS.

Children are so playful that they frequently strain their joints, and perhaps nothing is more painful than a strain. The parts frequently swell very much, and the pain is increased from the distension of the ligaments and muscles ; for the relief of this, the following liniment may be used :

*Recipe* : Spts. Camphor,  
Spts. Turpentine,  
Spts. Hartshorn,  
Sweet Oil,  
Laudanum, — of each half an ounce.

Mix them well together, and bathe the parts frequently. If the weather be cold, hold the strained part near the fire while you are making the application.

After the pain and swelling have subsided, in order to strengthen the parts, cold baths may be used two or three times a day, by pouring water from the spout of a coffee-pot, or a tea-kettle, from as great a height as the patient can bear it to fall.

At this stage of the cure, bandaging with a flannel or cotton roller will be of great service ; and if much irritation of the system has been produced by the sprain, some cooling medicines may be necessary, such as salts, rhubarb, or some gentle pills.

#### PUNCTURED WOUNDS.

By punctured wounds we mean those that are made by small instruments, as penknives, splinters, pins, nails, or anything else that will make a small hole in the skin, but penetrate deep in



the flesh. There is sometimes great danger produced by these wounds. If a nail should be thrust into the bottom of the foot or palm of the hand, so as to wound the fascia, there is much danger of lockjaw being produced.

When the puncture is made by a needle or pin, or any small instrument, in the palm of the hand or bottom of the foot, and the instrument breaks, and leaves a part remaining in the flesh, the remaining portion should be taken out. It would be better to cut down to and remove it by a pair of tweezers; after which, the wound should be dressed with a strong ley poultice. And this should be done, whether the foreign body be removed or not.

The poultice should be renewed every two or three hours, till the wound suppurates, when all danger of lockjaw is over, and not before.

If the wound is dry, and the pain great, the hole should be opened by a free incision with a sharp knife, and the wound filled with laudanum; when the strong ley poultice should be applied, as above directed, and continued till the wound suppurates.

In this case, the bowels should be freely evacuated by an active purge of calomel and rhubarb, or calomel and jalap, followed by oil.

We have frequently drawn out broken needles from the bottom of the foot, by poulticing as above directed. Beef's gall draws very hard, when applied to such wounds. It should be mixed with flour and the white of an egg, and applied to the puncture. Thorns, splinters, &c., have often been drawn out by this application.

If there be great irritation, and fever excited, which is sometimes the case, the patient should be bled, and live on a low diet.

#### FRESH CUTS.

Children are very apt to cut themselves; and it is a common practice to fill the cut with sugar, salt, soot, pepper, and such things; but they are all improper. They act as foreign matter, and, of course, will always retard the cure of the wound; for the suppurative stage must be brought on, either by art or nature, in order to throw out the matter thus introduced.

A fresh wound, where there is no bruise connected with it, should always be dressed in the simplest manner; and this is

done by bringing the edges of the wound together, first removing any foreign matter that may be there, and binding it up in its own blood, warm and fresh, if possible. The bandage should be so adjusted as to make the wound fit a little tighter than the natural skin, but not much; and the dressing should not be removed for two or three days, unless the part becomes painful, in which case, it should be removed the next day. If the wound is swollen or inflamed, it should be well washed with clean warm water, or milk and water, and a poultice of slippery-elm bark, or light bread and milk, applied. This should be renewed frequently, till the fever and swelling are all removed, when the wound will suppurate freely. It should then be washed with mild soap and warm water, and dressed with basilicon ointment, or simple cerate.

If bad flesh spring up in the wound, it may be removed by sprinkling red precipitate, or burnt alum, on it, till it becomes level with the other parts, when a bandage properly applied around the part will be of service.

Sometimes cuts degenerate into old sores; in which case, a piece of sheet lead worn over the sore will be found of service. The sore, in this case, should be bathed in cold water, night and morning, and the lead cleansed with water, and fitted over the sore, and kept there by a bandage.

In small wounds on the hands and feet, an artery is sometimes cut, and the child is likely to bleed to death. In such cases, a firm compress should be applied just above, but embracing the whole of the wound. This is best done by a piece of money, a split bean, or a light roll of linen, laid on the part, binding it on tight with a ribbon or narrow bandage.

#### OF WEARING THE HAIR.

It may be thought that a chapter on the subject of children wearing their hair is uncalled for and unnecessary. But we are satisfied that a work which is designed to embrace everything that will benefit the child and the grown female, would not be complete without including something on this subject.

It is a fact that cannot be denied, that the inordinate growth of any one part of the system is so far an injury to some other part. And this is natural enough; for nature has only made provision for the supply of a certain portion of nourishment, and, consequently, a certain portion of animal life. This is wisely

ordered and distributed, in compliance with the demand made by each separate organ of the system, according to their several functions. Now, if the vessels adapted to the supply of nourishment to the system should deposite double the quantity of this nutriment in the body and shoulders of a child or man, then it will be found that the extremities, as the arms and legs, of that individual will be meagre, small and weak. Hence, we see, where there is a disposition to gout in men or women, the body is apt to be large, but the legs very small in proportion. In this case, where does the disease manifest itself? Evidently in the feet, and the weaker part suffers.

So it is with every part of the body. When one part calls upon the nutritious vessels to supply it with more than its ordinary or due quantity of nourishment, some other part must of necessity bear this loss. Now, if the mind depend upon a due, healthy secretion in the brain,—not that the mind is a secretion, but a due quantity of healthy material must be maintained, in order to the development of a healthy and energetic mind,—then it follows, that any organ or part in the neighborhood of the brain, that will reduce the amount of healthy nourishment to the brain, will certainly weaken in the same proportion the active, healthy, and enduring intellect connected with that brain. We see how feeble the whole muscular system becomes, when disease has deprived the solids of their due and accustomed quantity of food, by which strength is imparted to the solids; and just so it is with the brain. Though that organ may not be diseased, let it be deprived of its proper amount of nourishment, by some other organ or part taking that nourishment to itself, and the mind becomes enfeebled. Look at the little girl who has worn her hair very long and thick till she is twelve or fifteen years old, and you will see her manifest in her features the visible phenomenon of a much younger child. Her mind is weak; her thoughts are much below her age, and she cannot prosecute any study with that rapidity and execution that other girls of her age and opportunities are capable of doing. To what is this to be referred? Is it not the want of energy in the brain? or, in other words, a lack of mental activity, or development. Other parts of the system seem to be duly developed, according to age; and this want of mental balance is owing to the great demand the hair makes upon the head for nourishment, thereby depriving the brain of a portion which it should receive. Hence the lanness of mental development or strength; and it will be found

that such girls weary in studying more than those who wear short hair. Of this the reason is obvious. The brain does not possess as much strength as if it received its due proportion of nourishment with the balance of the system.

We are ready to admit, that the mind, the product of the brain, is as active, for a short time, as if it possessed more strength; and, perhaps, even more active. But it is not so durable; in other words, it cannot bear the same power of application, as the brain of those who never suffer it to be weakened by giving the support which is natural to it to another organ. And hence, you see but few ladies,—if, indeed, you find any,—who always wear a heavy suit of long hair, capable of performing that intense and protracted mental labor that men can. The reason of this is not to be sought for in the want of mind, or the organization of its organ, the brain; for it is acknowledged that many ladies have as well-formed and as fully-developed brains as men have. It is, then, to be accounted for by the fact that they wear their hair too long, especially at an early age, when the brain is, by its natural growth, developing itself, and forming its fibrous structure, in which consists its strength.

After the brain has become fully formed, and its fibres developed and strengthened, wearing the hair long will not have so much effect upon it; but, even then, a heavy suit of hair, two or three feet long, cannot fail to prove detrimental. We would say, therefore, that children, girls or boys,—but the present fashions are more pernicious to girls than boys,—should not wear their hair more than six inches long,—less would be better,—till they are at least thirteen or fourteen years old. Let the brain obtain its growth, and become strong in fibrous development, before the hair is suffered to draw upon it for an over-balance of support. Even in adult age, you will always see those females who wear their hair not more than a foot in length, and not a heavy suit at any time, possessed of more mental energy, and capable of enduring mental labor for a much longer time, than those who wear very heavy suits of hair. In general, both males and females whose hair is disposed to curl, can bear more mental labor than those whose hair is always straight, and is disposed to grow very long and heavy on the head. Keep, then, your children's hair short, if you would have them possessed of active and strong, enduring minds; for many years' observation has brought us to the above conclusions.

## PART VI.

## OF THE PRESERVATION OF HEALTH.

As this work is designed exclusively for families, it is thought that a chapter, in the commencement of this part, on the preservation of the health of young girls, will not be out of place. What we design to say in this chapter will be applicable to the girl of ten years old and upwards.

It is the duty of the mother or guardian so to direct the conduct of the daughter that she may enjoy the blessings of life, and become a useful member of society. But, in order to lay the foundation of future usefulness, the health should be well guarded in early life. Much, of course, depends upon a good constitution, and strict attention should be paid to its development and preservation. The child, at an early age, should be guarded against all that would tend to weaken or derange this desirable attribute of the human system.

Exposure is one of the fruitful sources of injury to the constitution; and, therefore, the clothing should always be adapted to the season of the year and the temperature of the air, whether children are at home or abroad. Girls are generally clothed sufficiently warm while at home; but when they are going abroad, they change their warm apparel for thinner and cooler garments. They are often allowed to expose themselves to the chilling blasts of winter, with their arms naked, their breasts and shoulders exposed, and their feet clad with thin stockings and shoes, in the place of those just laid aside, which were warm and comfortable. This is a practice that cannot be too much deprecated, being one of the great evils of dress and fashion, upon whose altar thousands have been sacrificed. How many girls do we find in these days, with enlarged tonsils, and broken, croaking voices, the fruits of exposure, and nothing else.

The practice of tight-lacing is another fruitful cause of destruction of health and broken-down constitutions. Young girls should not lace at all; an easy, smooth jacket, to make the dress fit smoothly, is all they should wear. Are we asked why lacing is injurious? We answer, *First*: The ribs are soft and very elastic, and the cartilages that join them to the breastbone are softer than the ribs. If, then, a jacket or corset be laced around the ribs or chest so as to prevent a free and full play of the ribs at every inspiration, in the same proportion is the cavity of the



chest diminished, and, consequently, the lungs are deprived of a certain amount of atmospheric air, in proportion to the contraction of the ribs produced by the laced jacket or corset. Thus the order of nature is deranged, and the system is deprived of that due proportion of oxygen which is necessary to health, the vitality of blood, and the vigor and proper proportions of the system. One of the consequences of tight-lacing, therefore, is, that the lungs are prevented from discharging a due portion of carbonic acid gas from the blood, and receiving, in lieu thereof, a due proportion of oxygen from the atmosphere. Hence, the person looks pale, the lips assume a blue or purplish color, the breathing is labored, the breast heaves, and the circulation is prevented from going on as freely as it should. The small air-vessels of the lungs are partially obliterated; they become diseased in their action, and tubercles form in them or the lungs, and these remain, to become in a few years the seeds of an incurable consumption.

Again: The free action of the heart is prevented by tight-lacing; and the consequence is, it labors like a dying man, but in vain,—it cannot get relieved from its fetters. The blood is prevented from flowing with that freedom and ease which are essential to the well-being of the system, and the violent exertions which the heart must make in order to carry on the circulation, become the cause of disease in that organ which perhaps can never be cured.

*Another evil of lacing.* The stomach is always included in the deadly grasp of the corsets. The lower floating ribs are forced to take the place the stomach should occupy in part; the skirts are compelled to grow too narrow; the liver is also pressed too closely, and the stomach is bound as with a cord. The gastric juice is partly prevented from secreting, and that which is secreted is unhealthy; the ducts of the liver and pancreatic gland are prevented from performing their healthy functions; and, consequently, the food is not taken in due quantity to nourish the system, and what is taken is not properly digested, for the want of a free and healthy action of the digestive functions. Dyspepsia is the result,—a feeble, and finally a destroyed constitution; for all the powers of nature must act freely and naturally, or a sound constitution and good health can never be enjoyed.

Nothing is so fascinating, to an intellectual young man, as a well-cultivated mind, a rosy cheek, an intelligent eye, and a

corresponding expression of countenance; these you cannot have, if you suppress any of the healthy functions of the system.

Exercise is another essential item to promote the health of girls, and this they should be allowed to take freely. At an early age, let them run and play, jump the rope, throw the hoop, leap and skip; for free exercise gives freedom to the muscles and joints, and strengthens the nerves, all of which are necessary for the building up of a good constitution.

Girls should be allowed to sleep one third of their time, or eight hours in twenty-four; and, when younger, they should sleep more. The young of all the animal creation require more sleep than those that are fully grown. Girls, therefore, should retire early, that they may obtain sleep enough; rise early, and enjoy the benefit of the morning air, which is bracing to their systems. After children are ten years old, they should not sleep more than two in a bed, and there should not be more than two beds in a room, unless the room be very large and well ventilated.

Girls should rise early, and air and set their rooms in order; they should use a free ablution of cold water over their breasts and arms, especially as far as they are in the habit of exposing them to the air, as this will prevent their taking cold as easily as they otherwise would.

The diet of children should be plain and simple, as their digestive powers are not as strong as those of grown persons. The quantity should always be proportioned to the age and strength of the child. Much mischief is done by letting children eat too much. They should be allowed full time to eat, and be taught to chew their victuals well. They should be taught to eat anything that is common, so that they may appear easy at table at all times, and make their friends so likewise.

Frequent bathing is of great service to youth. It invigorates the constitution, and gives a fine complexion. The bath may be changed according to the season; it may be cold, tepid, or salt. When the cold bath is used, either fresh or salt, the skin should be well rubbed with a coarse towel, as well before they go into the bath as after they come out.

When children are healthy, liquid food is, as a general rule, better for them than solid food, because it supplies more blood, and this is needed to form and build up the solids; but they should be allowed some of both.

Children should always take light suppers and light breakfasts. Their dinner should be of more substantial food and taken more

freely. But they should never be allowed to eat in haste, as nothing aids the powers of digestion more than the perfect mastication of food.

#### THE TIME OF THE CATAMENIAL VISITATION, OR OF MENSTRUATION.

The period of menstruation is an important one, and should be well understood by mothers, that they may be the better enabled to give the proper advice to their daughters, in the development of this process. Mothers too often neglect this important point of health, and thus, lasting, if not incurable disease, is brought upon the daughter.

Great difference exists as to the period at which females menstruate, not only in different countries, but in our own. The catamenia, or menstruation, generally appears at or about the age of fifteen years; but it appears much earlier in some, and is delayed much longer in others. These variations will be found to correspond with the proportionate developments of the body and the genital system.

In an essay on the Natural History of Menstruation, published in the Edinburgh Medical and Surgical Journal, *Dr. Roberton* has given a fund of very valuable information on this subject. In the number of four hundred and fifty females, he found that

|    |              |                     |              |
|----|--------------|---------------------|--------------|
| 10 | menstruated, | for the first time, | at 11 years. |
| 19 | "            | "                   | " at 12 "    |
| 53 | "            | "                   | " at 13 "    |
| 85 | "            | "                   | " at 14 "    |
| 97 | "            | "                   | " at 15 "    |
| 76 | "            | "                   | " at 16 "    |
| 57 | "            | "                   | " at 17 "    |
| 26 | "            | "                   | " at 18 "    |
| 23 | "            | "                   | " at 19 "    |
| 4  | "            | "                   | " at 20 "    |

There are instances of still earlier menstruation than these to be found on record. There is a case related by *Dr. Martin Wall*, in the Medical and Surgical Transactions, of a child that menstruated at nine months old, and continued regularly from that early age. There is another, in the American Journal of the Medical Sciences for November, 1832, in which the catamenia appeared at three years of age, and were afterwards regularly discharged. Many other cases may be found in the writings of Lobstein, Meyer, Plouquit, &c., &c.

All medical writers agree, that the warmer the climate, the earlier the catamenia will appear; and the colder the climate, the longer it will be deferred. It is said to make its appearance in the East Indies as early as at the eighth or tenth year, but in Greenland it does not appear before the twentieth or twenty-second year of age.

Its duration is pretty equal in all climates. The women in hot climates, who menstruate early in life, become old proportionably soon; and thus we see why women bear children, and live to a much greater age in very cold than they do in hot climates.

This is the sum of what is generally given by authors on this subject; and, as with many other doctrines, this account is adopted to avoid the trouble of investigation. But there are still some men in the world that are not satisfied with all they read and hear, and, consequently, this subject has been more closely examined and looked into; and it has been found, by *Dr Robertson* and others, that as far as testimony can be gathered, it is observed that the same variations as to the commencement of menstruation in this country exist everywhere; but, as a rule, it is neither so much earlier in hot climates as has been supposed, nor so much later in cold climates. The fact which has led to this error is, perhaps, the intercourse which takes place between the sexes in hot climates at a scandalously early period. Hence the instances, but of rare occurrence, that girls sometimes become mothers at the age of ten years.

In a perfectly healthy female, the catamenial discharge is thrown off without pain or suffering; but in the present state of society, this is not generally the case. Most commonly, for some days previous to its appearance, the girl has a pain in her head, with general languor and heaviness. She feels indisposed to use much exercise; has some pain in the back, loins, and down the thighs, and occasionally she experiences some uneasy sensations in the throat. There is a peculiar dark shade over the countenance, and especially under the eyes; the perspiration has a faint, sickly odor; the breasts enlarge a little, and are more or less painful; the digestion is apt to be somewhat impaired; the appetite is variable, and frequently not very good. After these symptoms have been present for a day or two, the catamenia appears, and the uneasiness diminishes. It occasionally happens that the first, and sometimes the second period, passes without any discharge, and the health is not impaired.

The period of this discharge is from three to six days, and from three to six ounces of fluid are discharged during that time. The catamenia, to be regular, ought to return every twenty-eight days in girls and unmarried ladies.

Some persons suppose that every discharge from the vagina that is tinged with blood is a menstrual discharge, but this is not true. Every discharge from the vagina that clots is not menstrual; all that portion that clots is hemorrhage, and that portion which does not clot is menstrual. Keeping this fact always in your mind, you may be ready, in a moment, to decide whether the discharge is a secretion or hemorrhage.

The menses are always secreted in the same manner as the sweat is secreted from the skin, and they never come away in lumps, but always in a fluid state. The discharge is at times thicker and darker than it is at other times, owing to the retention of the fluid in the vagina after it is secreted and before it is discharged. Sometimes it appears in shreds and strings, when it has laid longer, and is still darker. The cause of the dark and stringy appearance of the catamenia is that the fluid part of the blood is absorbed before the discharge takes place.

Menstrual blood has a peculiar smell, differing from the odor of any other blood.

The menstrual function is of much importance to the female. By the healthy functions of the uterus it is prepared for the propagation of our species, and when the uterus does not perform its proper functions, barrenness is always the result.

The healthy action of the system, and general good health and soundness of the constitution, depend very much upon the healthy functions of the uterus. Females, then, and especially young girls, should be extremely careful of themselves during this process; and mothers should be particular with their daughters on this subject, and know that these things are all right with them.

Neither girls nor married women should change their clothing, so as to be liable to take cold, or produce a check, during this process. They should, by no means, put on any garment that is wet or damp during this time, and should be careful to keep their feet warm and dry.

Some girls are so imprudent that they will place their feet in cold water, or expose their feet and legs to the cool air, to check the menses, in order that they may be able to pay a visit, or attend a ball. This practice is but little better than suicide, often laying the foundation of disease, which terminates in death, after



an incalculable amount of suffering, and a heavy bill of expense. An imprudent check of the menses by cold often lays the foundation of incurable consumption.

Seeing, then, that much depends, in future life, upon the regular establishment of the menses, and a strict regard to their uninterrupted and healthy functions, too much care cannot be taken on this subject. If, by accident or some unavoidable cause, the menses should be checked, they should be restored as soon as possible. For this purpose, place the feet and legs in warm water, and, at the same time, sit over a vessel of warm water, with or without some bitter herbs boiled in it, and remain there till you are in a free perspiration; then wrap up in bed, and take a tea cupful of warm tea made of the root of vervine. This draught may be repeated every half hour, till the discharge returns; and this will generally bring it back, if it is used immediately.

If this should fail, take the following pills :

*Recipe* : Aloes Socotrine,  
Pulv. Rhei,  
Scammony, — of each ten grains  
Gum Myrrh, six grains.

Form six pills. Take three at first, wait three hours, and take the other three. They may be worked off with warm gruel. But should not either of these medicines be at hand, six or eight pills of the extract of white walnut, — *butternut*, — or a dose of castor-oil, may be taken. Bleeding in the foot, if there is much pain in the back or uterus, will be of service at this time.

#### OF THE CONSEQUENCES ARISING FROM THE NEGLECT OF THE MENSTRUAL FUNCTIONS.

It is of the most vital importance that the functions of the system be established in a healthy manner, in order to the full and healthy development of the body and constitution, and there is no one function of the system that involves the general health more than that of the uterus. The order of nature is such that the functions of this organ must be performed in due time and in a healthy manner; otherwise, the general system will, sooner or later, suffer from this defect.

When the functions of the uterus should be developed, according to age and constitution, if they do not fulfil what nature demands of them, some other organ, of equal, and perhaps of superior, vital importance, will act vicariously or sympathetically.

and strive to supply the place of the natural and healthy functions of the organ that fails to do its duty. How often do we see the lungs taking on a sympathetic action to supply the functions of the uterus! But, by supplying this vicarious discharge, the lungs may suffer violence in their structure, and the result has often been pulmonary consumption. If the functions of the uterus are neglected, we may always look for the lungs to bear a fearful part in sympathy with that organ.

Should there be a scrofulous diathesis or taint in the system, and the functions of the uterus not be performed in a healthy manner, we may look for the speedy, and perhaps fatal, development of scrofula.

The stomach and liver, also, bear a heavy portion of the morbid train of action arising from the want of a healthy development of the functions of the uterus. Liver complaint, dyspepsia, and all the concomitant train of symptoms, follow. The lymphatic system is sure to suffer, and dropsy may be the result.

When we take all these things into consideration, how important is it that mothers should attend strictly to the healthy development of the menstrual functions! It is the duty of the mother to explain these things to her daughters, and have the first appearance of derangement attended to, before the foundation of more serious consequences is laid. A neglect of these things places too much at stake; and strict attention should, therefore, be given to this matter.

#### OF RETENTION OF THE MENSES.

This disease is often confounded with suppression of the menses; but there is an essential difference between them. Retention of the menses is where they have never appeared, though the time of life has arrived at which they should appear. A retention of the menses may be produced by various causes, such as a feeble state of the system, preventing a proper development of the different organs. There is sometimes a defect in one or both of the ovaries, and then the uterus is not developed, and no catamenia appear. At other times, the ovaries are entirely wanting, and then the catamenia never appear. The patient, in this case, may be robust, and her voice is rather on the masculine order, or deep and hollow. She has no breasts, or they are very small.

Other constitutional diseases, such as scrofula, consumption, diseases of the liver, &c., may prevent the appearance of the catamenia. A thin membrane sometimes grows over the *os uteri*;

which prevents the flow of the menses. In this case, the regular menstrual feelings are present every month, but the fluid does not escape. In other cases, the vagina is closed, having adhered together from inflammation produced by erysipelas, or injuries of some kind, such as falls, &c. The hymen is, at times, imperforate, and the escape of the fluid is prevented.

In these latter named cases, the remedy consists in removing the defects or deformities. When the hymen is imperforate, the menses are secreted and retained in the vagina; and this can be known by examining the parts, when no passage into the vagina will be found. The membrane is generally pressed out a little; and, by raising it gently by a tap with the end of the finger, a fluctuation can be felt above.

TREATMENT.—The treatment of retention of the menses must necessarily vary, according to the nature of the disease, and the cause which produced the retention. The remedy to be used when the hymen is imperforate is, to divide it, by making two incisions across it, and quite through the whole substance. This membrane varies in thickness from an eighth to a half an inch; and when it is divided, the long-retained menstrual blood flows out as thick and black as tar. This membrane is sometimes so strong as to retain the menses till they distend the womb, and, in this case, the girl presents the appearance of being pregnant; but, by dividing the hymen, and letting off a quart or two of this fluid, the stigma is taken away, after suffering all that the tongue of slander and the finger of scorn could place upon her.

The same thing may occur by the adhesion of the walls of the vagina; and this difficulty can only be removed by the skilful operation of a good surgeon. When the mouth of the womb is closed by a membrane growing over it, it must be divided by the use of a proper instrument; after which, a very small bougie should be introduced into the womb through the cut made in the membrane, but great care is necessary in the performance of this operation. The bougie should be introduced every third day, till it has been repeated three or four times, in order to prevent the membrane from growing together again.

After these obstructions are removed, the case must be treated as the constitutional symptoms demand. We have succeeded several times in curing this disease by this operation. When the retention is produced from the want of a sufficient development of the constitution, those remedies that are calculated to develop and perfect the system must be used. A generous diet, such exer-

eise as the patient can bear, and lively company, will best accomplish this end; but the patient must wait till nature is prepared to do her work. No forcing medicines should be used at this time.

When the retention is produced by any constitutional disease, that disease must be removed by using the appropriate remedies.

When retention is the result of a defect in the ovaries, the menses never can be brought on. When there is only a partial development of the ovaries, a partial secretion may be induced by bracing and strengthening the system; but it will always be imperfect. The patient will never bear children, and it would be better for her not to marry.

#### OF SUPPRESSION OF THE MENSES FROM OTHER CAUSES THAN THAT OF PREGNANCY.

There is a period in female life when the menses cease to return; and this is the *cessation*, and not *suppression*, of the menses.

A suppression of the menses is the ceasing of that secretion after it has been once established, and before the woman has arrived at that age when this secretion should cease.

Pregnancy is by no means the only cause of a suppression of the menses, and we propose to treat, in this chapter, of other causes than pregnancy for the suppression of this secretion. Any cause that will prevent this secretion, after it has been once established, is worthy of notice in this chapter.

Girls are much more subject to suppression from unnatural causes than married women. The most common causes of unnatural suppression of the menses are: anxiety of mind; cold applied to the body, and especially to the feet; suddenly suppressed perspiration; falls, especially accompanied with terror; general debility, after protracted illness; a diseased state of the ovaria; diseased liver or lungs, &c.

The digestive functions may be so impaired as to cause suppression; or it may be the result of weakness alone, and, in this case, it is generally the precursor of some violent attack of sickness.

There is no strength of constitution, or condition of the system, that may not, from some one or more of the above enumerated causes, become the subject of this form of disease. In order to produce a suppression, the causes must generally be applied at or near the time of the flow of the menses.

Girls frequently ruin their health by putting on damp clothes at or near the time of menstruation; by going out in cold weather, wearing thin shoes and stockings; by sitting with damp feet in a cold room; or exposing themselves to an excess of heat, and then to a sudden check of perspiration. The consequence of this is, a check of the menstrual discharge. If they are of a full habit, they become feverish, and have pain in the head, back, and loins; the appetite is impaired; they are restless, and cannot sleep well.

If this state of things continue, they become pale and lose flesh; the feet and ankles swell in the evening; some derangement of the stomach takes place; they become more or less dyspeptic; a cough may supervene, which may terminate in consumption if it be not early removed; the breasts shrink and become flat; the joints become weak; and, if the suppression continue long, the lips become pale, and some fine, downy-looking hair grows out upon the upper lip; the voice loses its former musical sweetness; the eye becomes languid, and presents an anxious, inquiring look; the bowels generally become costive, and the appetite is deranged. When interrogated on the subject, from false delicacy, or some other cause, they are not apt to give the whole history of the case, and they answer questions reluctantly. A clear understanding of the case, with all its causes and symptoms, is very necessary to its correct treatment. Girls should immediately apprise their mothers, both of the suppression as soon as it occurs, and of the cause, as far as they are acquainted with it, in order that the proper remedies may immediately be used.

**TREATMENT.**—As soon as it is known that an obstruction exists, if it has been produced by the application of cold to the feet, or exposure to cold, which has acted upon the external surface in any way,—either as a sudden check of perspiration, cold or wet feet, or putting on damp clothes, &c.,—the feet and legs should be immediately placed in warm water. At the same time, the patient should sit over another vessel of warm water, in order that the steam may rise around her, till a free perspiration is produced. After remaining there for fifteen or twenty minutes, she should wrap up in bed, take a cup of tea made of the root of vervine, half an ounce to the pint, or drink thyme, balm or sage tea, pennyroyal or mint, and continue the use of the tea till she perspires freely for an hour or two. Bottles of hot water



or bricks heated, wet, and wrapped up in cloths, may be applied to the feet and small of the back.

By this course of treatment, the discharge will generally be reëstablished; but should it fail, or be neglected so long as to fail to produce the desired effect at that time, when the next period arrives, about the time the discharge should come on, take an active purgative.

*Recipe* : Scammony, ten grains.  
Aloes Socotrine, twenty grains.  
Gum Myrrh, ten grains.

Form eight pills. Take four first, and the other four in two hours; or,

*Recipe* : Calomel, ten grains.  
Aloes Socotrine, twenty grains.  
Race Ginger, ten grains.

Form eight pills. To be taken as above; or,

*Recipe* : Extract Butternut, thirty grains.

Form six pills. Take them at one dose, and drink freely of warm teas, to work off the pills. If there is no other impediment, the above remedies will generally remove the difficulty. But it is too often the case, that girls keep their true situation concealed, till some other function of the system becomes deranged; and then, the above remedies may not be sufficient to perform the cure.

In all suppressions or obstructions of the menses, if they arise from any of the above enumerated causes of exposure to cold, a peculiar state of inflammation takes place in the neck of the womb. It is not that kind of inflammation that is consequent from a high degree of vascular action, but one that is peculiar to that organ under such circumstances, and is consequent upon a state of engorgement of the uterine vessels, which always exists in a menstrual state of that organ, but is relieved by the natural flow of the menses. For the cure of the disease, under these circumstances, we use a variety of medicines, such as,

*Recipe* : Balsam Pera half ounce.

Of which ten drops may be taken, on sugar, three times a day; or,

*Recipe* : Balsam Copaiba, half ounce.

To be taken as above; or,

*Recipe* : Balsam Fir, half ounce.

Of which thirty drops may be taken three times a day, on sugar; or,

*Recipe:* Turlington's Balsam. one ounce.

Twenty drops of this may be taken three times a day, on sugar; or,

*Recipe:* Spirits of Turpentine. half ounce.  
Comp. Spirits Lavender, half ounce.

Mix, and take a tea spoonful three times a day, in sweetened water; or,

*Recipe:* Volatile Tinct. Guaiacum, one ounce.

Of which, forty drops may be taken three times a day, in water; or,

*Recipe:* Oil Savin, two drachms.  
Spirits of Ammonia, two drachms.

Mix, and give twenty drops three times a day, on sugar.

Keep the bowels open with the following pill:

*Recipe:* Aloes Socotrine, twenty grains.  
Pulv. Rhubarb, ten grains.  
Scammony, twenty grains.  
Castile Soap, ten grains.  
Race Ginger, ten grains.

Form twenty pills; and give three or four every night, at bedtime, or just as many as will operate once or twice the next morning. If these fail, the following pill may be given:

*Recipe:* Sulphate Iron, two drachms.  
Sub Carbonate Soda, two drachms.  
Flour, half a drachm.

Mix, and form forty-eight pills. Take one of these pills, morning, noon and night, for three days; and then take two at night, and one morning and noon. Keep the bowels open with the above purgative pills; or,

*Recipe:* Sulph. Zinc, two drachms.  
Pulv. Liquorice Root, one drachm.

Mix, and divide into twenty-four powders; take one, morning, noon and night, in sugar and water.

All the above remedies have been used, and, in their turn, have done much good; but, in addition to these, the following remedies have been used, and have had their advocates: Chalybeate waters, as well as teas, herbs, roots, &c., such as a tea made of sabina leaves, cedar, dittany, vervine root, valerian, Seneca snakeroot, broad-leaf sage, tansey, rue, thyme, gentian, columbo, black hellebore, silk weed—the root—bloodroot, and

madder; all of which have had more or less reputation, at different times, for removing obstructions of the catamenia.

In using any of the above medicines, if the quantity taken should sicken the stomach, the dose should be lessened. It will require, as a general rule, the perseverance of three or four weeks to effect a cure; and, in some cases, where the obstruction has been of long standing, two months.

In using the teas made from the above herbs, from a small tea cupful to half a pint may be taken three or four times a day. The roots are stronger, and, therefore, less should be taken at a time.

The gums are generally made into a tincture by pulverizing an ounce of the gum, and adding thereto, in a bottle, one pint of good spirits. Shake the bottle every day for fifteen days, and then take a tea spoonful three times a day, in water.

For the removal of wind or cramps from the stomach, the following medicine may be given :

*Recipe :* Tincture Fœtida, half ounce.  
Tincture Castor, half ounce.

Mix. Give a tea spoonful, in water, and repeat every fifteen minutes, till the symptoms are relieved.

It is not unfrequently the case, that the first return of the menses is almost a colorless fluid.

At this time, the following medicine may be given :

*Recipe :* Aromatic Wine of Iron, four ounces.

A tea spoonful should be taken, in sweetened water, three times a day, and continued till the menses are fully established.

At every month, when a pain in the back, together with a sensation of fulness in those parts, is experienced, the patient should place her feet and legs in hot water, and sit over a vessel of the same, for half an hour, before retiring to bed. This should be repeated every night for three or four nights.

It is encouraging to obtain any discharge from the vagina at the regular time; and by perseverance, a cure will be performed. A blister applied to the loins at this time will frequently aid in bringing on the discharge, and some have used blisters upon the breasts. We have not known them to do good; but, in obstinate cases, where other things fail, they are worthy of a trial.

Free exercise should be taken, when the patient is able to perform it, by riding on horseback, jumping the rope, walking.  
&c.

The diet, in all cases, should be regulated according to the digestive powers of the stomach, and nothing should be taken that cannot be easily and properly digested. More depends upon the quantity than the quality of the diet; and, therefore, the stomach should never be loaded with any kind of food.

#### OF PROFUSE MENSTRUATION.

Much has been said and written on this subject, but we think that all that is necessary to be said may be contained in a short space.

We should recollect that every undue discharge from the uterus is not a menstrual discharge, and, therefore, should not be called excessive menstruation. In order to place this question on certain and definite grounds, we will just say, as we have often said in this work, that pure menstrual blood never coagulates or clots. Any blood discharged from the uterus that will clot, is, therefore, not menstrual blood, although the discharge may occur at the regular period for menstruation. To be sure, then, that the discharge is menstrual, we must be sure that it does not clot. The discharge may be very thick, stringy, or ropy, and yet not clot.

By observing these rules strictly, we shall find but few cases that are strictly cases of profuse menstruation.

There is another fact to be borne in mind, and that is this:—that which would be profuse menstruation in one person, would not be so in another. This arises from the fact that the constitutions of women vary as much as their temperament. A lady of a weak or delicate constitution may menstruate one ounce per day, and that may be too much for her delicate frame, and, therefore, may by some be called profuse menstruation; and in such a case it might be true.

But another lady, of a robust and vigorous constitution, rigid fibre of muscles, and sanguine temperament, would menstruate two ounces per day; which, for her, would not be profuse.

A full knowledge of this subject is necessary, in order to enable us to form a correct opinion, and adopt a correct practice. In all cases where the discharge clots, the case is to be cautiously treated as hemorrhage; but, at the same time, we must keep in view the fact that it is connected with menstruation.

In those cases where the discharge is profuse, and the evidence

shows that it is entirely menstuous, the treatment should be adapted to profuse menstruation only.

**TREATMENT.** — When the discharge is truly menstuous, whether it is of a natural appearance or vitiated in character, the same remedies are required for its cure. The first thing to be observed is to keep the patient still, and in a cool, comfortable situation.

If her bowels are not sufficiently open, give the following medicine :

*Recipe :* Rochelle Salts, one ounce.

Dissolve in a glass of cool water, and take it at one or two draughts, half an hour apart. The patient's drink may be of a cooling, acidulated kind, such as orangeade, or cream of tartar in water. After the bowels are freely acted upon, if the discharge is still too profuse, give the following :

*Recipe :* Sugar Lead, twenty grains.  
Pulv. Opium, two grains.

Mix in six powders. Give one every two hours, in sugar and water, and keep still.

As soon as the discharge is checked, give a dose of castor-oil. The hips and abdomen may be lightly bathed with vinegar and water, moderately cool, while she is taking the powders; and by all means let the mind be kept tranquil and cheerful.

If the feet should be cold, as they are sometimes, they should be warmed by wrapping them in dry, warm cloths, and not by warm water, or anything that would afford steam, for that would relax the surface and increase the discharge.

If the sugar of lead and opium cannot be procured, a solution of alum-water may be taken. But the patient must be very cautious not to take too much of it. A lump as large as a hazelnut, dissolved in a pint of water, will be enough to be taken in one day.

All the powerful vegetable astringents have been brought into use for the purpose of checking this secretion. But few of them, however, have been retained; and perhaps a tea made of the sycamore bark, or chips, is as good as any of them for this purpose. The following is a valuable remedy :

*Recipe :* Prussiate of Iron, thirty grains.  
Powdered Liquorice Root, sixty grains.

Mix, and divide into ten powders. One may be taken every six hours, in sugar, till the discharge is checked



Profuse menstruation rarely observes the regular periods for its return, but comes on every twenty-two or three days, though some women have a return every two weeks; notwithstanding which, they become pregnant; but cases of this kind are rare.

The radical cure is to be performed by using proper remedies during the intervals. And these remedies are, a generous diet, and moderate but regular exercise, either on foot or on horse-back. The patient should take strengthening medicines, such as,

*Recipe*: Rust of Iron, half ounce.

Divide into twenty-four powders, and take one three times a day, in sugar; or,

*Recipe*: Sulphate Zinc, two drachms.

Divide into twenty-four powders, and take one three times a day, in sugar; or,

*Recipe*: Iron Scales, (from an anvil,) one ounce.

Put these into a quart of good vinegar, and take from a tea to a table spoonful three times a day, as the patient's stomach will bear it. It should be mixed with water before it is taken.

A good vegetable tonic may be made by taking:

*Recipe*: Yellow Poplar Bark, one ounce.  
Columbo Root, one ounce.  
Orange Peel, half ounce.

Make all fine, and add to them one pint of water. Shake the bottle every day for six days, and then take a table spoonful, in water, three times a day; or,

*Recipe*: Gentian Root, half ounce.  
Orange Peel, half ounce.  
Carbonate Iron, one ounce.

Make all fine, and add to them one pint of whiskey and a pint of water. Prepare as above, and take in the same way.

If the patient wear corsets at all, she must wear them very loosely, that the blood may have a fair chance to be equally distributed through the system.

Where the menses are profuse, and the patient full of blood, with a rigid fibre of muscle, the treatment should be different, both in the attack and in the interim. During the attack, she should be purged more freely, with the following medicines:

*Recipe*: Scammony,  
Rhubarb,  
Jalap,  
Castile Soap, — of each ten grains.

Form eight pills. Give four first, and repeat two every three hours, till they operate freely. This medicine should be given two or three days before the expected return of the menses, and repeated every day till they do return.

The patient should keep still. Her diet should be light, and her drink cool. All excitement should be avoided. The bed-chamber should be well ventilated, and if the patient be a married woman, she should keep apart from her husband for several days previous to her attack. When it comes on, the same remedies may be used as in the first species; but the case should be treated very differently in the intervals between the visitations of the catamenia, when, instead of taking tonics, she should keep the bowels open with gentle, cooling medicines, such as,

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap,—of each twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills, and take three or four of these pills every night, at bedtime. The patient should take free exercise in the open air, and live on a light diet. A self-possession of mind, in every instance, is absolutely necessary to the performance of a cure.

#### OF PAINFUL MENSTRUATION.

This form of disease has many varieties, all of which we shall treat in this chapter, in regular order, and give the symptoms and treatment for each in its regular place, immediately following the description and cause of the disease.

The distinctive mark of this disease is not the quantity of menstrual fluid discharged, for this may be scanty, profuse, or in the proper quantity; it consists in the pain which is experienced before the discharge appears, and during its continuance. The amount of pain varies very much in different individuals, and in the same individuals at different times.

The pain may be moderate, and last only a few hours at each menstrual period, or it may be so severe as to cause fainting, and, by repeated shocks, break down the constitution and entirely destroy the patient's health. The character of the pain, and its accompanying symptoms, vary, according to the constitution of the subject; and, on this ground, the disease may be divided into three forms:—the *nervous*, the *inflammatory*, and the *mechanical*.

Difficult menstruation may occur at any menstrual period, and it is rarely confined, after it has occurred, to one or two periods only. In some cases, it may be traced back to the commencement of menstruation, and occasionally it continues through the whole of menstrual life.

*First.* Nervous, painful menstruation may attack females at any age, but the attacks are more frequent after the thirtieth year than before that period. It is to be found in unmarried women, and in married women who have not borne children, more frequently than in those who have borne children. It is almost exclusively confined to those of a nervous temperament, and thin, delicate habit of body.

The monthly paroxysms present all the peculiar characteristics of an irritable state of the nervous system. A day or two before the paroxysms come on, there is a sensation of general uneasiness, and a deep-seated feeling of cold; some patients say their bones feel icy cold. A pain in the head may precede or succeed the discharge, and sometimes the pain in the back and head alternate, being first in one place and then in another.

When the pain is in the back, it commences low down, extends round to the abdomen, and goes down the thighs.

In some cases, the pain is constant; in others, it abates occasionally.

The amount of suffering varies very much at different times and in different individuals. In some cases but a few hours elapse, after the pain attacks, till the menses appear; while in other cases it will be a day or two before they appear. These pains are generally attended with a sense of bearing down, which adds very much to the suffering of the patient. Finally, the menses appear, sometimes slowly and sometimes in slight gushes. The quantity varies very much in different persons, and in the same person at different times.

The discharge is sometimes dark, and at other times paler than usual, or mixed with small clots. There is sometimes a peculiar membrane discharged, first described by *Morghani*, and afterwards by *Dinman*. This membrane is composed of plastic lymph, such as we see thrown up by children laboring under croup, and which generally takes the shape of the inner surface of the uterus; but it is sometimes discharged in shreds.

When the figure of the uterine cavity is preserved, it may give rise to suspicions of pregnancy; and some ignorant persons have actually defamed the character of girls and widows, on seeing this

membrane. But such defamation arises from a want of knowledge on the subject, and the discharge of the membrane is no proof of a want of chastity in the suffering female from whom it has proceeded. If the little bag be slit open, a small quantity of fluid will be found in it; but it possesses neither the substance nor vascularity of after-birth, nor is there any point to which a navel-string has been attached. The expulsion of this deciduous membrane is attended with pains like those of labor.

Some patients discharge this bag at several successive menstruations, while others only discharge it occasionally.

Several of our best authors on midwifery suppose this membrane to be secreted at every difficult menstruation, and that it passes off unobserved. We are, however, of a different opinion. Although these membranes do occur occasionally, yet they do not occur at every menstrual flux. Conception is very rare under these circumstances, yet it may and does occur occasionally.

At the menstrual period, the mouth of the womb is more open than at any other time. It is soft, and slightly swollen, with an increase of heat in it. The appearance of the menses is not, in this form of the disease, immediately followed with relief from pain, as it is in the next species to be described; but the pain subsides gradually, alternating with pain in other parts, as the teeth, face, &c. The pulse, during the attack, is rather lowered than increased in strength; the patient has no fever, and is not apparently weakened by the attack. Each attack may last from twenty-four hours to four or five days; after which time, the patient generally resumes her ordinary employments. She may have a continuance of headache; the bowels are regular, and the appetite is generally but little impaired.

We have now described the symptoms and progress of this disease, as we have generally found it. But we should neither do the subject justice, nor act fairly, were we not to give another view of it, which is too often presented to the close inquirer after truth. We have seen cases where the patient's health, during the interval, was much more seriously affected, being liable to returns of severe headache or pains in the back, so intense, and so much aggravated by walking, that they were obliged to lie on the sofa, or remain almost constantly in bed; and, as the natural consequence of suffering and confinement, the functions of the stomach and bowels became impaired, and the general health seriously injured.

*Causes of painful menstruation.*—The causes of painful men-

struation are various. A cold—especially if taken during menstruation, or after a miscarriage, or delivery—will often induce a severe attack. Sudden shocks, mental emotions, acting upon an irritable condition of the womb, may also give rise to an attack, especially if applied at or near the menstrual period; and any cause that will bring about an enfeebled condition of the system will be attended with similar results.

The only mistake at all likely to be made is, the confounding of one of these attacks with abortion, or miscarriage. And this is made on account of the paroxysms of pain and bearing down, and this error becomes more plausible when the membrane already described is discharged entire. But if the case is one of disordered menstruation, we shall find that the patient has been regular every month, and perhaps has had a similar attack a month or two before. And this, at once, decides that it is not pregnancy.

But, in addition to this, the discharge which accompanies abortion is decidedly blood; and this is a menstrual discharge. The quantity is greater, however, than in ordinary menstruation; but it will not clot, and it has the odor of menstrual blood.

If a membrane should be discharged, it contains nothing but water, and of course no fœtus is detected, since there is none there.

The *external* surface differs more from an after-birth than the *internal*. On the after-birth, we find more or less of the corion; but on this membrane, we find none of it, however rough it may be. It differs very much from the other,—indeed, it bears no resemblance to it whatever, and a correct decision as to which of the two it is, is speedily made.

TREATMENT.—The indications of cure are two-fold:

*First*, to mitigate the pain, and reduce the suffering during the attack; and,

*Second*, to prevent a return of the disease, by appropriate remedies administered in the intervals.

Our principal reliance, for the first part, is to be placed in sedatives. When the pain in the back first commences, the following medicine should be given:

*Recipe*: Calomel, ten grains.

Aloes,

Rhubarb, -- of each twenty grains.

Form ten pills. Give five of these pills at first; and, if they should not operate in three hours, give three more. If they do **not** operate well in three hours, give the remaining two. Work



them off with gruel or chicken-water, and take nothing cold till the operation is over. If the pain still continues, give the following :

*Recipe :* Opium, four grains.  
Gum Camphor, ten grains.  
Castile Soap, four grains.

Form eight pills. Give one every half hour, till the pain is removed, when they may be discontinued. Or, you may use the following clyster :

*Recipe :* Laudanum, two drachms.  
Tinct. Foetida, half ounce.

Mix. Give two tea spoonfuls, in half a pint of thin gruel, a little warm, in the form of an injection ; after receiving which, the patient should lie very still, as long as she can retain it. Should it pass off, and the pain still remain, it may be repeated every hour, till relief is obtained ; or,

*Recipe :* Pulv. Camphor, twelve grains.  
Carbonate Ammonia, six grains.

Mix in six papers, and give one every hour, in sugar and water, till the pain is relieved ; or,

*Recipe :* Morphine, one grain.  
Scammony, twenty grains.

Mix in four papers, and give one every two hours, in sugar and water, till the pain is relieved ; or,

*Recipe :* Tincture Castor, two drachms.  
Laudanum, one drachm.  
Acetate Ammonia, one drachm.

Mix ; and give a tea spoonful, in warm tea, every half hour, till the pain is relieved. The ergot will sometimes do much good in these cases.

*Recipe :* Pulv. Ergot, one drachm.

Divide in twelve papers, and begin their use three days before the expected attack ; take one powder, morning, noon, and night, in a little sirup, being careful to keep the feet dry, and to avoid over-heat. Bathing the feet in warm water every night, for a few nights before the attack, will be good, but especially so when it comes on.

The bowels must be kept open, all this time, with,

*Recipe :* Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb, — of each twenty grains.  
Gum Myrrh, ten grains.

Form fifteen pills. Take three or four at bedtime, and, if they should not operate by morning, take two or three more; or,

*Recipe*: Fol. Senna, one ounce.  
Epsom Salts, one ounce.

Make a strong tea of the senna; dissolve the salts in it, and take half a tea cupful every hour, till they operate well; or

*Recipe*: Castor-Oil, one ounce.  
Vinegar, half ounce.

Warm, and mix them for a dose. If none of these medicines can be obtained, take a purgative of any gentle medicine you may have.

*The second indication.*—During the intervals, every means should be made use of to strengthen the patient and to lessen the general and local irritability. To this end, the diet should be generous and nourishing, and free exercise should be taken in the open air once or twice daily. If the patient is not able to walk, she should ride on horseback, or in an open carriage. Chalybeate water, or some of the preparations of iron, should be given:

*Recipe*: Tinct. of Iron, one ounce.  
Vitriolated Ether, one ounce.

Mix, and give twenty drops, in water, just before breakfast, dinner and supper; or,

*Recipe*: Sulphate Iron, one drachm.  
Sub Carbonate Soda, one drachm.  
Pulv. Gum Arabic, half drachm.

Form thirty pills. Give one three times a day, for three days, and then give two three times a day, for a month.

The following medicine has been used successfully by several eminent physicians:

*Recipe*: Tinct. Cantharides, half ounce.  
Tinct. Cinnamon, two drachms.

Mix, and give twenty drops three times a day, in water. If there is any difficulty produced in making water, the use of the drops must be discontinued, and slippery-elm or flax-seed tea must be taken freely, till that difficulty subsides, when the drops may be taken again. The difficulty in making water should be produced two or three times, to have the full effect of the medicine.

The following medicine is good:

*Recipe*: Volatile Tinct. Guaiacum, one ounce

Of which a small tea spoonful may be taken three times a day, in water, and continued for a month.

*Dr. Dewees* says the pain is sometimes increased the first visitation after taking this medicine, but, if persisted in, it will produce a cure.

*Dr. Chapman* recommends very highly the use of Seneca snakeroot, which should be taken in the intervals of menstruation. A day or two before the expected attack, a blister, applied on the sacrum, below the small of the back, and allowed to stay till it draws well, will often do much good. Great benefit has also been experienced from the use of the cold or tepid water, thrown into the vagina every day, during the intervals; but, on the approach of the attack, warm water must always be used.

The patient should take a hip bath every night, for two or three nights previous to the eruption of the menses.

This disease is sometimes very obstinate, resisting all remedies for months, and sometimes years. In most cases, however, we can, by the use of the above remedies, effect a cure in a few months. It rarely lays the foundation of any fatal disease; and, should all our efforts prove fruitless, the patient may look forward to the time of the cessation of the menses, knowing that she will then meet with a perfect cure.

The second variety which we propose to notice is the *inflammatory, painful menstruation*.

This species differs very materially from the one described above, not only in its symptoms, but also in its subjects. It occurs in females of a full habit, of the sanguine temperament, and at an earlier age than the kind previously described. Unmarried women are very liable to be afflicted in this way.

It generally comes on suddenly, and is caused by cold, or some violent constitutional disturbance. Young girls of a plethoric habit are liable to suffer slight symptoms of it at every catamenial visitation; but marriage cures this form of the disease.

In the milder form, there are but few precursory symptoms; but the more violent forms of the disease are preceded by restlessness and rigors, with some fever, and flushing of the face, and general headache. For some time before the appearance of the catamenia, the patient suffers with pain across the back, and an aching sensation is felt in the limbs; a weariness of the whole system, and intolerance of light, are apt to supersede the flow of the menses. The face is flushed, the skin hot, the pulse full and strong, and upwards of one hundred beats in the minute.

In some cases, the fever rises so high that delirium comes on; but when the flow takes place, all these symptoms subside.

The time that elapses between the first appearance of the pain and the flow varies very much at different times and in different subjects; but less, perhaps, than in the preceding form of this disease.

The discharge, in this form of the disease, is more abundant, and is also occasionally accompanied with a membrane similar to that discharged in the first species.

During the intervals, the health of the patient is very little affected. She sometimes has a slight pain in her head or side, but this is not constant, and generally is not much noticed either by the patient or her friends. It is not uncommon for a patient laboring under this disease to be afflicted slightly with the whites between the periods of menstruation, and this is rarely the case in the former species.

The severe symptoms may occur with every menstrual discharge, but they are not so regular in their intensity as they are in the nervous form of this disease, and occasionally a period will pass with but little suffering.

If the neck of the uterus be examined during this time, it will be found more than usually full, with a considerable increase of heat in the parts; but no tenderness will be felt on external pressure above the pubis.

The breasts not unfrequently swell and become painful at this time, owing to the great sympathy between them and the uterus. A severe attack of this disease will disqualify the uterus for impregnation for sometime afterwards; but slight attacks will not prevent conception. Indeed, marriage is the best remedy for this disease; but, even then, discretion and judgment should be used.

**TREATMENT.**—In the commencement of the attack, when the patient is laboring under fever, pain in the head and back, and is restless, twelve or fourteen ounces of blood should be taken from the foot with the lancet, or six or eight leeches should be applied to the insides of the thighs. But if neither of these can be done, though we are not much in favor of bleeding from the arm in menstruation, yet, rather than fail to take blood, it must be taken from the arm. The bowels should then be freely acted upon with a cooling purgative; as,

Or,

*Recipe* : Rochelle Salts, one ounce.

Or,

*Recipe* : Epsom Salts, one ounce.

*Recipe* : Seidlitz Powders, one ounce.

Either of which may be dissolved in a glass of cold water, and taken at one or two draughts.

Cooling drinks, a light diet, and absolute rest, should be enjoined; and these remedies will often give speedy relief. The depletion must not go too far, or the flow will be prevented.

If, after the operation of the medicine, the flow is not sufficient we may give,

*Recipe:* Pulv. Camphor, six grains.  
Pulv. Opium, one grain.

Mix in two powders, and give them, in sugar and water, two hours apart. Take a cup of warm tea, and cover up in bed. During the intervals, active exercise should be taken on foot. The diet should be light, all stimulants avoided, and the bowels kept open by the following medicine:

*Recipe:* Aloes Socotrine, forty grains.  
Pulv. Rhubarb, twenty grains.  
Scammony, twenty grains.  
Castile Soap, twenty grains.  
Tartar Emetic, three grains.

Form thirty-six pills, and take three or four every night, at bedtime, or just as many as will operate once or twice the next morning. The drink may be cool water.

These remedies must be varied to suit the constitutions of the different patients who have to use them, as some will require more, and some less, for a dose. But a little observation, and some judgment, will direct in this matter.

I have found the following remedy to be of great service in painful nervous menstruation. It should be taken for one or two days before the return of the menses, a tea spoonful three times a day, and, if that quantity should not keep the bowels open, a little more should be taken:

*Recipe:* Tincture of *Actea Racemosa*, two ounces.

To be taken as above directed, and continued till the flow is established; then stop.

*Third. The mechanical difficulty in menstruation* consists simply in a narrowing of the vagina, which may be caused by inflammation, or it may be a natural defect. This variety has been met with by Drs. *Chapuron*, *Mackintosh*, of Edinburgh, *Orailly* and *Churchill*; but such cases are very rare. In short, the narrowing of the vagina constitutes but little of the complaint; yet, when it does exist, it certainly should be remedied.

In order to ascertain the facts in this case, an examination



must be made; and when the sufferings of the patient are violent an examination should by all means be made. The finger should be passed gently into the vagina, and, if there be an obstruction, the finger must be withdrawn. Care must be taken not to rupture the hymen or vagina. If a closure of the vagina be met with before you reach the mouth of the womb, it may be safely regarded as the cause of the patient's suffering. In order to remove this obstruction, the following medicine should be used:

*Recipè*: Extract Belladonna, twenty grains.  
Warm Water, one pint.

Dissolve the extract in the water, and inject it into the vagina with a womb syringe, keeping the hips raised so as to retain it as long as possible. It should be retained for ten or fifteen minutes. when a small-sized bougie must be passed very gently through the little passage already relaxed by the belladonna. Let the bougie remain for five or six minutes, and watch the patient, that she may not be left in a fainting condition. After this, give a cooling purgative, and in two or three days repeat the operation. This treatment must be continued, till a number six bougie can be passed, without using the wash, when this remedy has been carried far enough. The case must then be treated as the other symptoms demand, according to the second form of this disease.

The operation above described should always be performed with the patient's hip lying over the edge of the bed. (*See chapter for turning a child in labor.*) In passing the bougie, care must be taken not to turn the point up towards the pelvis, or the vagina may be injured, and inflammation produced, and serious consequences follow. In such a case, bleeding and purging would be needed to reduce the inflammation; when, perhaps, these remedies would be contrary to the proper course of treatment which the original disease required.

#### CHLOROSIS, OR GREEN SICKNESS.

The characteristic symptoms of this disease are, a pale complexion, languor, listlessness, depraved appetite and digestion, and the menstrual secretions depraved or inert, especially at their commencement.

The causes of this disease are numerous, of which one of the most frequent is retained or suppressed catamenia. Another is excessive menstruation; a third, an inability to obtain the object

of desire,—in popular language, love-sickness;—and a fourth, dyspepsia, or some other cause of general debility about the age of puberty, by which the natural development of the sexual system, and the energies of its secretions, are at this time interfered with.

A pining, eager, ungratified desire for any object whatever, in a particular state of constitution,—whether for an individual or for a particular circle of society, for home or for country,—is well known, in many cases, to break down the general health, and to lay a foundation for chlorosis, or a chlorotic condition of the system.

Men are liable to become chlorotic, as well as women.

Retained menses and dyspepsia in women, at the age of puberty, are, perhaps, the most common causes of chlorosis; and hence the declaration of some writers on this disease, that chlorosis and dyspepsia are inseparably connected together. Chlorosis may, and does, occur in females who have an interruption of the menstrual flow. A derangement in quantity or quality is always an attendant on chlorosis; and, in many cases, the leading symptoms of the disease.

Chlorosis is characterized by a diseased state of the genital system operating on the system at large; and hence, it is most frequently met with at the age of womanhood. A certain state of the genitals is necessary to give tone and energy to the whole system; and, therefore, if this stimulus is wanting, the whole system may fall into a flaccid or torpid state, and from thence chlorosis may arise.

There are evidently two states of constitution in which this disease may occur.

*First.* In those persons of a feeble habit, with a full and tense pulse, who are subject to severe pains in the head or bones. The ordinary cause, in this species, is taking cold in the feet at the time of the menstrual discharge. The pains in the back and loins, and often in other parts, evince a local debility, and an increase of irritability, with more or less of spasms in the organs which form the seat of the disease. There is here a morbid accumulation of living power; the parts are satiated or overloaded; and hence, proper secretions are prevented from taking place. If the disease is neglected in this stage, it will terminate in the other species presently to be described. But we will here finish this part by giving the treatment.

**TREATMENT** — The cure for the disease in this plethoric state

of the patient calls aloud for depletion, and free bleeding will be found to be indispensable. Perhaps it may be necessary to be repeated. Cooling purgatives should be administered; such as,

*Recipe* : Epsom Salts, one ounce.

Or,

*Recipe* : Rochelle Salts, one ounce.

Or,

*Recipe* . Cream Tartar, half ounce.  
Milk of Sulphur, half ounce.

Mix. Any of these may be given, in water or sweetened water.

If the patient feels much pain in the back or hips, the hip bath must be used, and repeated, if necessary. When the fulness of the blood-vessels is subdued by this treatment, enjoin a low diet, regular hours, regular exercise, a sober, temperate mind, and she will soon enjoy good health.

*The second species*, namely, that form of the disease which originates from debility, is characterized by a feeble state of body, great inactivity and love of indolence, and shortness of breath on much motion; the feet and ankles are cold, and swollen at night, the pulse quick and feeble, the mind becomes enervated, and the temper fickle, with great irritability. All these symptoms are to be met with in a much greater degree than in the first species, evidently showing a great disturbance of the general system.

We rarely find these patients in the quiet and sober retreats of a country life, marked by simple meals, healthful activity, and early hours of retiring and rising. They are to be found in the gay and glittering retinue of town and city life, where the young and old crowd into close parlors, and exercise till the midnight has long passed by, and then turn out into the chilling blast of winter, heated and lightly clad, bareheaded, and bare-necked. The havoc thus produced is to be seen in the pale and bleached face, the withered form, emaciated muscles, and departed symmetry, of those who were once the perfections of beauty and pictures of health. And thus, when nature is perverted, beauty becomes food for worms, at an untimely hour.

Under the influence of such fashion, it is impossible for a growing girl to acquire a healthy maturity. Most happily for her, in following up the fashions of the day, she must go into the country to spend a summer, and thereby obtain a respite from the privilege of self-murder.

**TREATMENT.** — In the treatment of this form of the disease, we can use neither the lancet nor active purgatives. The bowels, however, must be kept gently open with mild purgatives, such as

*Recipe :* Pulv. Rhubarb, one drachm.  
Castile Soap, half drachm.  
Aloes Socotrine, twenty grains.

Form twenty-four pills. Give three or four of these pills every night at bedtime, or just as many as will operate once or twice the next day.

The blood must be recruited by tonics, such as,

*Recipe :* Rust of Iron, two drachms.  
Gum-Arabic, twenty grains.

Form twenty-four pills, and give one three times a day ; or,

*Recipe :* Steel Dust, one drachm.  
Vinegar, one pint.

Put the steel dust into the vinegar, and shake the bottle every day for three days ; then take a tea spoonful three times a day, mixed in water ; or,

*Recipe :* Sulphate Iron, one drachm.  
Sub. Carb. Soda, one drachm.

Form thirty pills, and give one three times a day. This will correct the menstrual discharge, which is always more or less depraved, in quality and quantity. All the bitter tonics are more or less admissible in this disease.

A generous diet is necessary, and regular hours for rest and rising must be observed. Let these both be early ; take exercise in the morning air, ride on horseback, keep cheerful company, lay off your tight corsets, dress warm and easy ; do not let your mind be so weak as to love those who will not love you. Let the manner and matter of your life be such as will give you good health and an intelligent mind, and you will be more likely to obtain your desired objects, of rank, love and happiness.

#### OF DISEASES OF THE CLITORIS, OR HERMAPHRODITE.

The clitoris has been occasionally the seat of scirrhus and cancer ; and when this is the case, the patient should immediately send for a surgeon, and submit herself to an examination, so that the parts may, if possible, be removed, as no other remedy will hold out a prospect for a cure.

The excessive enlargement of this organ has, by a surgical

operation, resulted in the happiest effects. Fortunately for the ladies of the United States, they are not much subject to this disease.

The existence of hermaphrodites has gained the assent of many of the illiterate; nevertheless, the facts in the case will prove that no such being exists in the human family. Frequent appeals to the physician are made on this subject; and some, either from ignorance or from a desire to gratify the public mind, assent, or say that their existence may be possible. But when we come to examine these parts, and compare them with those of the male, we find that, both externally and internally, they differ very materially; and, therefore, the whole world has not produced one well-attested case of the kind. Nor do the instances of the other mammalia, purporting to be of this kind, bring any proof of the fact; for every case hitherto produced, and examined by judges of the anatomy of these parts, has proved to be that of a defect in the organization of the parts, and not of an hermaphrodite. It is contrary to the organization of animal nature that one person should possess both sets of the organs of generation. So fully satisfied of this fact are the judicial physiologists, that their decisions are, that it is impossible that both sexes should be combined in one individual of the same species.

#### OF INFLAMMATION AND TOO GREAT DENSITY OF THE HYMEN.

Some anatomists doubt whether there exists such a membrane as the hymen, nor is this subject yet decided by them. Indeed, it is not a matter of much consequence whether it ever is or can be settled, if the same mode of reasoning be followed by those who deny its existence; for, if we attempt to demonstrate its existence, they, like *Ambrose Pare*, declare it to be an unnatural production. Now, if the occasional absence of a production is to be assumed as the natural condition of the parts, in defiance of its frequent presence, it would confound all our philosophy, and set aside a thousand matters of fact. All that has been argued by philosophers amounts to this negative; see Fallopius, Visalius, Degraaff, Buffon, and many others, who say they did not always find the hymen when they sought for it. But is this a reason that such a membrane does not exist in the properly organized parts? If the existence of the hymen be denied, it would be improper to talk of its imperforate state.



Of the imperforate state of the hymen we know but little from personal observation, having seen but one case in thirty years' practice. The most, therefore, that we can say on this subject, must be derived from others; and, as this is, in many respects, an important subject, we shall avail ourselves largely of what they have seen and said.

When the hymen is imperforate, the first inconvenience is experienced soon after puberty. The menstuous fluid is duly secreted, but not finding an outlet, it accumulates from time to time, till the vagina is completely filled. Afterwards, the uterus becomes distended, and this distension may continue to increase till the abdomen presents the appearance of pregnancy before the true cause is discovered. *Dr. Denman* relates an interesting case of a young lady, who, after hearing the ill-natured suspicions of those around her, submitted to an examination, which eventuated in the discovery of the imperforation of the hymen. The doctor says: "The circumscribed tumor was found to reach as high as the navel, and the external parts were stretched, by the pressure of a round, soft substance at the orifice of the vagina, in such a manner as to resemble the appearance which they have when the head of a child is passing through them. But there was no entrance into the vagina. On the following morning, there was an incision carefully made through the hymen, which had a fleshy appearance, and was thickened in proportion to its distension. Not less than four pounds of blood, of the color and consistence of tar, was discharged. The tumefaction of the abdomen was immediately removed.

When the hymen is imperforate, the woman suffers pains at each return of catamenia, not unlike those of labor. They have, indeed, been mistaken for labor-pains. *Dr. McCaully* confesses that, in one case, he mistook the protruded hymen for the membranes forced down by labor. The patient was relieved by an incision being made through the dense hymen, and the discharge of the menstuous blood. *Dr. Denman*, *Dr. Frank*, *Drs. Smellie* and *McFinny*, and *Mr. Coby*, have all related cases in which the abdomen was more or less distended, and the woman suffered more or less at each menstrual period; and all were relieved by dividing the hymen; some, however, not submitting to the operation, till their characters were well-nigh ruined from a supposition of pregnancy. The blood, in every case, was of a menstrual character; it did not coagulate, nor was it in the least fetid. It was, however, thick and dark, evidently showing that

it is a secretion of its own kind, and neither blood from a hemorrhage nor from a vein. The membrane, in these cases, is sometimes half an inch thick or more.

The operation consists in dividing the membrane with a sharp instrument, and after the blood is fully discharged, making three or four mytriform cuts, so as to insure a sufficient passage for the escape of the menses when they shall appear again.

Care should be used to prevent the cuts from growing together, till the edges of the membrane heal. This may be done by keeping a small roll of silk, well oiled, and passed through the cuts into the vagina, and retained there for a few days by the T bandage, till the parts are perfectly healed.

The menstruous blood is, to all intents and purposes, an extraneous fluid to the womb, when retained there. The greatest surprise is, that the womb should not continue to contract, without ceasing, as long as this fluid is retained; but this is not the case, for after they continue for a certain time, the woman enjoys a state of ease. Nor is this calm disturbed, until a new secretion produces an increased distension of the womb, when that organ is again provoked to contraction. The previous calm is most probably owing to the absorption of the thinner parts of the fluid, or to the uterus accommodating itself to the distension.

The discharge of urine, and the evacuation of the fæces, are not unfrequently interrupted by the weight and pressure of this fluid. In Mr. Finny's case, convulsions were frequently produced. He divided a hymen which was more than an inch thick, and this is a most unusual thickness.

Mr. Burns, on the contrary, has generally found the membrane thin; and, by putting the experience of both gentlemen together, we may expect the membrane to be from one quarter to three quarters of an inch thick. In a case which came under our own observation, it was about half an inch thick.

The quantity of fluid discharged is sometimes very great, but the average quantity is from one to two quarts. *Benevolies'* case, related by Mr. Burns, makes the quantity thirty-two quarts, but it is reasonable to suppose that some dropsical secretions were mixed with it.

In all these cases the blood was fluid, and there was no coagulum present.

The remedy, in all cases, is the same as above stated.

Great care should be used, when the hymen is thick, and the patient old, lest the peritoneum be wounded, and inflamma-

tion ensue. *Drs. Denman* and *W. C. Worthington* both cite cases in which inflammation of the peritoneum succeeded to the operation, and proved fatal to the patient. One of these was the case of a girl only fourteen years old; and there is a case related in the *Medico Chirurgical Review*, by *Professor Langenbock*, very analogous to those above, which also proved fatal.

In order to avoid the cutting of this membrane, the case should be treated with palliatives, till the hymen becomes distended and protruded, before the operation is performed. The hymen is sometimes extremely dense, but sufficiently perforate to let the catamenia pass.

Conception may take place, even under these circumstances; and a number of cases may be found on record of this description, in which the birth of the child was obliged to be accomplished by dividing the membrane while the woman was in labor. *Doctors Hildanus, Pare, Ruysch, Meriman*, and many others, mention such cases. The late Dr. C. Carie invited *Doctors Dewees* and *Chapman* to witness a case of this kind. The woman had been in labor with her first child for twelve hours when they saw her. The pains were strong and frequent; the perineum was very much distended, and alone supported the efforts of the uterus; the os externum was entirely closed, with the exception of an opening about the size of a goose-quill; and this had been her situation for several hours before they were called in. As all chance of spontaneous delivery, or even one effected by the force of pain, was at an end, it was thought best to cut the rigid hymen, and give the vagina a chance to dilate, and the perineum to unfold. Doctor *Dewees* accordingly passed a probe-pointed bistoury between the child's head and the perineum, and made a slight incision in the latter. This enabled him to introduce his forefinger, with which he broke down or dilated the whole of the existing membrane, in such a manner that there was nothing but the natural resistance of the parts to contend with; and, in about two hours more, the child was safely delivered, without injury either to it or to the mother.

In performing this operation, great care should be taken to cut no more than the hymen. As soon as the finger can be introduced, the attachments of the hymen to the vagina may be easily removed. The woman soon recovers if the operation is well performed.

## HYSTERIA, OR HYSTERICIS.

This disease is known by the familiar name of *nervous*. The subject of it is affected in so many different ways, at different times, that it is almost impossible to define it so clearly as to leave no doubt on the mind as to its real nature. But there is one thing we feel confident we can do: we can so far define it that it cannot be mistaken, at least in a great majority of cases.

It is a notorious fact, that males are subject to this disease as well as females. The old authors almost constantly refer it, in females, to some disease of the uterus. Though this organ may be affected in many instances where hysteria is formed, yet it is often met with where this organ is sound in itself, and in all its functions.

Some authors think that the seat of hysteria is in the brain, while others think it has its seat in the nerves, and a third class contend that its seat is to be sought for in the stomach, bowels and muscles. These various opinions grow out of the fact, that all these organs are affected, more or less, in their turn, by this disease. But as it is not our business, in this place, to theorize, we shall proceed to lay down the symptoms as clearly as we can, and point out the remedies for them.

Women are more liable to this disease during the menstrual periods than they are at any other time, yet many cases do occur before and after that time.

According to the various shapes which the disease assumes, so will be the symptoms in the attack. If the stomach be the seat of sympathy, we shall meet with such symptoms as eructations, sour belchings, pain in the stomach, water-brash, costiveness, and a sensation as if a ball were rising up into the throat and choking the patient.

If the seat of the disease be in the bowels, they will be filled with wind, and spasms will follow, accompanied by a brisk purging or costiveness cramp in the abdominal muscles, &c.

If the liver be the seat of attack, the consequence will be, either too great a flow of bile or none at all, biliary calculi, and pain in the right side, with a sense of fulness and distension, obstructions, &c.

If the seat of the disease be in the kidneys, an immoderate flow of pale-colored urine will take place. At times the quantity will be diminished; and then it is highly colored, and sometimes very offensive. There is also, at times, great pain in the



parts, resembling that produced by stone in the bladder, and the urine may be tinged with blood.

If the bladder be the seat of attack, either the urine cannot be held, or it is suppressed entirely. This is owing to the seat of the spasm; if it be in the body of the bladder, the urine will flow; if in the neck of the bladder, it will be retained or suppressed.

If the heart be the seat of attack, there will be violent palpitations of that organ; the pulse will be irregular, accompanied with faintness.

If the attack be in the scalp, there will be a coldness in the top, or a sense of heat in the back part of the head; but there will be no appearance of inflammation, although it will be sore to the touch. It will be accompanied with irregular spasms.

If the seat of the disease be in the muscular system, there will be most violent spasms or nervous twitchings. In hysteria, we see more or less of these symptoms, though they are not all found in any one case.

Perhaps there is no disease to which we are liable, in the treatment of which the skill and judgment of the physician are more fully tried than in this. Fortunately, however, it rarely proves fatal.

The causes of this disease are various, and we shall not attempt to enumerate them all. Suffice it to say, anything that will tend to destroy the general tone of the system, if it is brought on gradually, may act as a remote cause; as too sedentary a life, overstimulating diet, or medicine if too long continued, long watching, disappointed hope, abused affection, grief, terror, prolonged anxiety, &c. These, and many others, may act either as the remote or immediate causes of hysteria. In some women, any of these causes, from the slightest indications, may produce paroxysm; while, in others, they must be strongly and repeatedly applied before the fit is produced.

This is a very important subject, and we will, therefore, be excused for being a little particular, both in its description and treatment. When a predisposition to hysteria exists, or the disease has been once called into activity, a great variety of cases may excite a paroxysm of greater or less force. An hysterical paroxysm, so called, is where the system is thrown into that violent spasm called a fit of hysterics; and a vast variety of symptoms, such as palpitation of the heart, globus hystericus, a large flow of limpid urine, rumbling of wind in the bowels, belching, acid stomach, whimsical appetite, trembling, cold feet and



hands, &c., may manifest themselves from time to time; all of which are termed merely nervous symptoms. It is thought by *Mr. Tate*, and some others, that these symptoms, here called nervous, have for their cause some diseased condition in the lower portion of the spinal marrow, which may be detected by pressing on these joints.

A genuine fit of hysteria varies very much in the suddenness of the attack; sometimes coming on in an instant as it were, and at other times approaching more slowly. The approach of the fit is sometimes announced by a headache of a peculiar kind, oppression about the heart, heaving of the chest, difficulty of breathing, and alternate laughing and crying, which are the most prominent symptoms of hysteria. They may alternate with each other, or they may exist separately.

The patient sometimes talks very much in one of these fits; and again, while in a paroxysm, sings melodiously and touchingly, so that the audience cannot restrain their tears.

*Dr. Dewees* says he knew a lady who sung most sweetly at all times, but when under an hysterical paroxysm, her voice, manner, and the subjects of her songs, were so touching as to dissolve all those around her in tears.

An hysterical fit, when severe, is extremely awful; the violent and varied contortions of the body would seem to threaten the dislocation of every joint, while the swollen face, the protruded tongue, the starting eye, the gnashing teeth, the appalling scream, render the whole a scene of great horror. Sometimes the hair is torn out by handfuls, and the chest is beaten by the clenched fists with great violence, while the whole muscular system, when thrown into action, is endowed with a strength that bids defiance to all efforts to arrest. The muscles are contorted, the abdomen feels as hard as wood, the frothy saliva is thrown several feet from the mouth, the lips look livid or pale, the hands are clenched, and the breathing is excessively labored and difficult, till, finally, in some cases, it seems to cease altogether, and the patient falls away as in the arms of death. Taking the whole together, nothing can be more alarming to the bystanders than a genuine fit of hysteria, and the physician is sometimes unstrung so far as to be at a loss to know what to do in the case.

**TREATMENT.**—The pulse is to be especially attended to in the treatment of nervous diseases; for whoever expects to be successful in the treatment of these diseases, without paying particular attention to the pulse, will find himself disappointed. Who has

not witnessed the want of success of opium, asafœtida, and all other stimulating anodynes and anti-spasmodics, when the pulse was full and the patient plethoric?

If the pulse be full, a little blood must be taken, either from the arm or foot, when the following pills may be administered :

*Recipe* : Blue Mass, twenty grains.  
Aloes Socotrine, twenty grains  
Gum Fœtida, twenty grains.

Form twelve pills, and give four first, and two every two hours, till they operate freely. If they should be slow in operating, it may be presumed that there is spasmodic action in the stomach or bowels; in which case, the following medicine may be given :

*Recipe* : Comp. Tinct. Castor, two drachms.  
Ether Sulphuric, two drachms.  
Laudanum, one drachm.

Mix, and give a tea spoonful, in cold water, every twenty or thirty minutes, till the spasms are removed; or, you may give the following :

*Recipe* : Compound Spts. Lavender, half ounce.  
Tinct. Castor, two drachms.  
Elixir Paregoric, two drachms.

Mix; and give them as above, till the spasms are removed. When the pills operate well, a temporary relief will be experienced.

If the pulse be disregarded, and stimulants be given while it is excited, the disease will be aggravated; and then the dose must generally be increased, because the symptoms are also increased. In all cases where the symptoms are increased by stimulants, the dose should be lessened or discontinued, till the effects of the first have passed off. When laudanum disagrees with the patient, only half the usual quantity—say twenty drops—should be given, and that in sweetened vinegar; this should be repeated every half hour, till the spasms are relieved; or the following may be given :

*Recipe* : Tinct. Asafœtida, two drachms.  
Vol. Tinct. Valerian, two drachms.  
Spirits Camphor, one drachm.  
Tinct. Castor, one drachm.

Mix them together, and give a tea spoonful every fifteen or twenty minutes, till the spasms are allayed.

The practice of holding camphor or hartshorn to the nose is very wrong, and should never be encouraged. Trying to open the clenched hands should not be attempted.

Cold water, given in small portions, and frequently repeated, is a good remedy in hysteria. It may be applied to the fore and top part of the head, with a towel, or poured gently on the head.

The bowels should be kept gently open with the following pill :

*Recipe :* Pulv. Rhubarb,  
Gum Fœtida,  
Pulv. Jalap,  
Castile Soap, — of each twenty grains.

Form twenty pills. Give three or four every night, at bedtime, and continue them as long as necessary to keep the bowels regular.

All exciting causes should be avoided; the patient should go into lively company, and take exercise in the open air. Her diet should be light; it would be better to take no supper, or a very light one. She should also rise early, and take the morning air. If the system is weak, and requires something to strengthen it, the following tonic may be taken :

*Recipe :* Rust of Iron, two ounces.  
Gentian Root, one ounce.  
Orange Peel, one ounce.  
Old Whiskey, one quart.

Put the articles into the whiskey; shake the bottle two or three times a day for six days, and then take a table spoonful, in water, three times a day, just before eating.

The cold bath is of great service in many nervous affections, and may be used to an advantage in hysteria; but judgment must be exercised in using it. It is best to use it in the morning, in the form of a shower bath. The water, in the first instance, should be only fifteen or twenty degrees below the heat of the body; but, after it has been used three or four times, it may be taken colder and colder, till it can be taken from the spring and showered upon the patient. The patient should be rubbed all over with a coarse towel just before the bath is used, and the same operation should be performed on leaving it; if a glow is felt after the bath, it will do her good. But if she experience a chill, which lasts any length of time, it is an indication that she should desist from the use of the bath, especially if she feel weak afterwards.

If the patient is very weak at the commencement, or scrofulous, salt should be added to the water; but if there be any internal disease of importance, the bath should not be used.

It is important in the management of all diseases, to give them that attention which their symptoms demand, either for the body or the mind. To this end, let the patient know that

you are willing to do everything for her in your power; and, at the same time, it will be well candidly to inform her that her disease is not of that dangerous character she may have supposed.

Respecting the diet of nervous persons, no one can tell exactly what will suit every case; but, in all the variations of symptoms and circumstances, the diet should be light. This, however, is a vague term, when the patient is left to judge of what is a light diet; for each one will call that article light which she likes best. Some general rules, therefore, should be laid down on this subject.

No article of food that will be heavy on, or produce wind in, the stomach, become acid, produce costiveness, create a diarrhœa, or cause a belching, is a light or proper diet for that person. Much liquid food is not good for nervous persons. Of the meat kind, she may take beef, mutton, venison, rabbit, fowls that have no down, birds, partridges, pheasants, &c. Soft-boiled or poached eggs, potatoes, beets, turnips, rice, barley, simblins and pumpkins, are all easy of digestion when well cooked; and every article of diet should be well cooked, but not dried till all the sweetness is exhausted from it. The bread should be cold, unless it be corn bread; and sweet new butter may be taken in small quantities. Lard, which has been well rendered, and sweetened by freezing, is easier digested than butter of any quality. The patient should always stop eating before the demands of her appetite are answered.

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## PART VII.

### OF LEUCORRHŒA, OR WHITES.

This disease is so common in the United States, that the term *whites* is familiar to almost every lady.

The lethargic and more indulgent part of society are most liable to it. Those who keep late hours in crowded cities; indulge freely in drinking hot tea and wine, turning night into day, and day into night, and, by sitting up late, receive all the impurities of the night air, and of heated and crowded rooms, in large assemblies; spend the greater part of the morning in bed, and rise only to lounge away the most of the day on the sofa; and, when night comes on, again repair to crowded rooms,

where they take active exercise, dance and heat the blood, breathing an air that has been breathed several times before, and thus has been deprived of most of its vital principle; and then, at a late hour, when midnight coldness has chilled the air, and all nature is sealed with ice, again expose themselves to the chilling blast;—these persons, we say, are more subject to leucorrhœa than the lady who lives in the country, and takes proper exercise in due time; retires early and rises early; breathes the pure morning air when every leaf and every flower is throwing out its fragrance, giving new life and vigor both to body and mind. Such ladies are rarely afflicted with leucorrhœa. They also live on plain and wholesome diet, and use but little of wine or cordials. While the first-described lady is like the leafless tree, shorn of all her beauty, health and strength, the second is like the rose of Sharon, or the ever-blooming hyacinth, full of freshness and vigor; and will live many years longer, and enjoy the sweets of life and social happiness.

But there are other causes for the whites. Marriages, and premature labors in married women, are often the cause of this disease; and we may say, in a word, that anything that will tend to irritate the uterus, as well as the general system, may bring on the whites. Let the remote or exciting cause be what it may, this disease, when once confirmed, is of difficult treatment.

*Description of the Disease.*—The first appearance of this disease is a thin and almost colorless fluid passing from the vagina, which discharge afterwards becomes white like milk. It often comes on at intervals; and, when it makes its first attack, perhaps will show itself a few days before the catamenia appears, and cease until that discharge is over.

The white discharge, however, in its first onset, is not apt to be regular in its returns, immediately after the menses cease.

In the first stage of the disease, there is some pain in the back, and, at times, a slight soreness in the vagina and neck of the womb. But this is not always the case, and is not detected by any except the married lady. The bowels are also more or less costive.

In this stage of the disease, the appetite is but little impaired, the spirit and complexion pretty good, and the mind is cheerful and lively. This stage may last for months, or years, before it changes and takes on the second stage, or it may run through in a few weeks or months.



TREATMENT IN THE FIRST STAGE. — The success in the treatment of this disease depends very much on the strict adherence to the use of the remedies prescribed.

If the disease has occurred in an unmarried woman, she should, if fleshy, be bled from the arm. The parts should be kept clean by washing with Castile soap and warm water; after which, a wash of green tea or alum-water, not very strong, may be used. The bowels must be freely purged with the following medicine:

*Recipe:* Pulv. Jalap, twenty grains.  
Pulv. Rhubarb, thirty grains.  
Aloes Socotrine, twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills, and take three every night at bedtime, or just as many as will operate once or twice the next morning. Or you may use the following:

*Recipe:* Extract White Walnut, forty grains.  
Aloes Socotrine, twenty grains.  
Tartar Emetic, two grains.

Form twenty-four pills, and take them as above directed; or, if the other medicines are not convenient, use,

*Recipe:* Senna Leaves, one ounce.  
Pulv. Rhubarb, half ounce.  
Cardamon Seeds, two drachms.

Boil these, in a quart of water, down to a pint; strain, and squeeze out the liquor; dissolve in it, of *Rochelle salts*, one ounce; sweeten, and add three spoonfuls of spirits, to keep it from souring, and take a table spoonful two or three times a day, so as to produce one or two free operations daily.

The drink should be cold hyssop tea, of which a pint may be taken daily. The diet should be light, and mostly vegetable. All fatiguing exercise should be avoided; the feet should be kept warm, and the body clad comfortably.

If the patient be a married woman, she must observe all the above directions, and, in addition to them, use a wash of the following articles:

*Recipe:* Pulv. Alum, one drachm.  
Sugar Lead, one drachm.  
White Vitriol, one drachm.

By mixing these in a mortar, a paste will be formed, of which one third may be mixed in a quart of rain or river water. Shake it well in a bottle, and, after using the Castile soap and water, with the curved pointed womb-syringe, as much of the

wash as the syringe will hold may be thrown up the vagina two or three times, and this should be repeated twice or thrice daily. She should also live apart from her husband for a few weeks, and use the same kind of diet and drink as that prescribed for the unmarried woman.

*Second stage of Leucorrhœa.*—In the second stage of this disease, all the symptoms are aggravated. The white discharge becomes thicker and more profuse, being now of the consistence of cream that has stood for some hours on the milk. It frequently appears in lumps, and if the parts are not kept clean, the discharges become acrid. The pain in the back, which before was troublesome, is now increased; the bowels are more deranged; the subject becomes lean and looks pale; her features are generally sharp, her appetite irregular, and she is liable to have attacks of colic and hysterics. Her spirits are variable, — sometimes she is very cheerful, and in a short time gloomy. If she should become fretted, which she is most liable to do when afflicted with this disease, it is immediately increased on her, and the soreness in the neck of the womb and vagina increases. In a word, her general health is now suffering from the ravages of the disease. She has pain, — sometimes in one side, and then in the other; and, at times, this pain is felt low down in the groin, in one or both sides.

**TREATMENT IN THE SECOND STAGE.**—It will always be found advisable to commence the cure, in this stage, by giving a dose of medicine that will cleanse the stomach and bowels well; and, where the strength will allow it, an emetic should be given first.

*Recipe:* Pulv. Ipecac., twenty grains.  
Tartar Emetic, three grains.

**Mix.** Dissolve this powder in nine table spoonfuls of warm water, and give three spoonfuls first, and repeat one every fifteen or twenty minutes, till she pukes freely; when a glass of warm water must be given every time she pukes, till she has three or four operations up. It may then be turned down, with gruel lightly seasoned. Nothing cold must be taken, till the operation is over. If the medicine should not operate freely on the bowels, take the following pills:

*Recipe:* Blue Mass, sixteen grains.  
Pulv. Rhubarb, twelve grains.

**Form** six pills, and take three first; wait three hours, and take the other three. Take nothing cold, till the operation is over.

If the blue mass cannot conveniently be obtained, you **may** use the following :

*Recipe* : Calomel, ten grains.  
Rhubarb, sixteen grains.

Form six pills; to be taken as above. If the patient is of a full habit, she should be bled; and a light bleeding may be repeated, if the womb continues to feel sore. The patient must not be frightened at the lancet because she feels a little weak. If the pulse be hard or full, bleeding must be resorted to, and the bowels kept open by the following medicine :

*Recipe* : Scammony, twenty grains.  
Aloes Socotrine, twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills, and take from two to four at bedtime, or just as many as will operate twice the next day. This purgative may be changed occasionally for the following :

*Recipe* : Senna Leaves, one ounce.  
Manna Flake, one ounce.

Make a strong tea, and take half a tea cupful every hour, till it operates well; or you may take,

*Recipe* : Calcined Magnesia, one drachm.  
Cream Tartar, one drachm.

Mix, and dissolve in a little sweetened water, and take it for a dose in the morning, fasting; or you may take, occasionally,

*Recipe* : Epsom Salts, one ounce for a dose.

Dissolve in a glass of warm water over night, and when settled in the morning, drink the clear liquor.

The parts must be particularly attended to, and kept clean all the time; otherwise, all remedies will fail to cure. Frequent washing, therefore, with soap and water, will be necessary. The patient must live on a light diet.

After this plan has been pursued till the discharge is altered, and becomes thin and free, the following wash may be used, with the syringe, in the same manner as you used the warm water, or soap and water :

*Recipe* : Sugar Lead, one drachm.  
White Vitriol, one drachm.

Mix, and divide into three powders; dissolve one in a quart of rain water, and inject three syringefuls three times a day, always using the soap and water first. All the washes may be used cold in this stage of the disease, except in very cold weather

The hyssop tea should also be cold, and be drunk freely all the time of the cure.

It is supposed by some that leucorrhœa is a disease of debility, and requires tonics; but this is a mistake. It is a disease of increased action, and requires a low diet and cooling purgatives. If the cure is not performed by this course of treatment, you must use the following wash:

*Recipe:* Sugar Lead,  
Pulv. Alum,  
White Vitriol, — of each one drachm.  
Nitrate Silver, twenty grains.

Make all fine, and mix. This preparation will absorb moisture from the atmosphere, and become a blue paste, one fourth of which is enough to dissolve in one quart of rain water. It must be used as a wash, as above directed.

While using the above remedies, the patient must take all the exercise she can bear, either on horseback or on foot; retire early to bed, rise early, and take the morning air; always taking a few mouthfuls of some light diet before going out. The patient should not sleep on feathers in warm weather, but use a hair, moss, or shuck mattress. Sexual intercourse must be rarely indulged in.

*Third stage of Leucorrhœa.*—Should the disease have been neglected till it passes into the third stage, all the symptoms will be aggravated. The discharge will have changed color from a yellow to a greenish hue; it will pass away in lumps, as well as in thin fluid, and become so acrid as to excoriate the parts; and, if a strict adherence to cleanliness is not observed, the skin will be taken off. The vagina will become very sore, and the pain in the womb will increase; there will be great heat in the urine, which will also be more highly colored than in the second stage. There is pain and great weakness in the back and loins; sexual connection is painful, and there will be more or less pain in the sides, breast and stomach. The patient now becomes dyspeptic; her diet is apt to sour on her stomach; the bowels are irregular, and she may have a sympathetic cough, but expectorates very little, if at all. She sleeps badly, and does not feel refreshed in the morning; her appetite is depraved, and her spirits broken; she is altogether in a sunken condition, both in body and mind, has lost her flesh, is feeble, easily affrighted and irritated, and is apt to think that her feelings and condition are not appreciated, and that she is neglected. She is continually fearful of

sinking down under debility; is lean, pale, and almost totters in her steps.

**TREATMENT IN THE THIRD STAGE.**—In treating the third stage of leucorrhœa, all the remedies of the second stage, except bleeding, may be used; and, in addition to them, the lunar caustic may be applied to the vagina and neck of the womb, by using a solution of it as below:

*Recipe:* Pulv. Lunar Caustic, twenty grains.  
Rain Water, one pint.

Dissolve the caustic in the water, and take a piece of fine sponge, as large as the first joint of the thumb, and tie it fast on the end of a small stick or whalebone; wet the sponge thoroughly in the solution, and, after washing out the vagina with warm water and Castile soap, introduce the sponge, and pass it over every part of the vagina and neck of the womb. It must be repeatedly wet, and this application continued, till you are sure every part of the vagina has been touched with it. As soon as a slight stinging sensation has been produced in every part of the vagina, its application may be discontinued for that time. The hands should be covered with gloves, to protect them from the medicine, as it will stain them black for a time. A suitable bandage should also be worn, to protect the clothes; for this medicine dyes an indelible black.

At the same time, the following medicine may be taken internally:

*Recipe:* Balsam Copaiba, half ounce.  
Haarlaem Oil, half ounce.

Mix, and take from ten to thirty drops three times a day, beginning with the lowest, and gradually increasing, till you reach the highest number. Take it on sugar.

A little good port wine may be taken two or three times a day, and a blister should be applied to the small of the back.

The medicine applied with the sponge may be used every third day; and, in the intermediate days, a wash of Castile soap and warm water should be tried; if much soreness be felt, flaxseed or slippery-elm tea must be used, instead of the soap and water. The washes should be applied with the syringe.

The greatest attention to cleanliness must be observed, for without this, a cure cannot be performed. A mattress of hair, moss, or shucks, must be used, instead of one of feathers. The patient must be kept apart from her husband.

The bowels must be kept open with:



*Recipe* : Scammony,  
Aloes Socotrine,  
Castile Soap,  
Pulv. Rhubarb, — of each twenty grains.

Form twenty pills, and take from two to four every night at bedtime, so as to give one operation in the morning; or,

*Recipe* : Pulv. Rhubarb,  
Aloes Socotrine,  
Castile Soap,  
Salts Tartar, — of each twenty grains.  
Balsam Fir, — enough to form a pill mass.

Form twenty-four pills, and take them as above.

If the patient be bilious, she should take :

*Recipe* : Blue Mass, twenty grains.  
Pulv. Rhubarb, twenty grains.  
Salts Tartar, ten grains.

Form twelve pills, and take them as above directed. She must take exercise in the open air, either on foot, horseback, or in an open carriage. Her company should be cheerful, and especially should she be made as happy at home as possible.

When the discharge has abated, and the color becomes white, she may take some tonic, such as the following :

*Recipe* : Pulv. Gentian Root, half ounce.  
Pulv. Orange Peel, half ounce.  
Carbonate Iron, one ounce.

Add to this medicine a pint of old whiskey; shake the bottle every day for three days; then add a pint of water, and shake the bottle again every day for three days, and take a table spoonful three times a day, mixed in water.

Such diet only should be taken as the stomach will digest easily. Friction with a flesh-brush may now be used all over the abdomen, as well as over the body and limbs, every morning and evening. The surface may be sponged all over with salt and water, after using the flesh-brush.

This disease sometimes makes its appearance in pregnant women, and may be very profuse. All that need be done in this situation is, to keep the parts clean, drink freely of hyssop tea, keep the bowels open, and live on a light diet. If she is full of blood, she should be bled; and if there is much heat in the vagina, the sugar of lead wash must be used. After delivery, the patient will probably suffer no more from it, especially if it comes on from some cause depending on it. If it does not subside, however, after delivery, the remedies prescribed in this first stage should be used.

The following medicine has done much good in all the stages of leucorrhœa :

*Recipe :* Pulv. Alum, one drachm.  
Saltpetre, twenty-four grains.

Mix in twelve powders, and take one three times a day, in sugar and water.

Let it be ever remembered, that, without cleanliness, all remedies will prove unavailing in the cure of this disease.

#### WARTY TUMORS OF THE VULVA.

These tumors take their rise from the vulva, and vary in size from that of a hen's egg to that of a pea. The tumors are always seated on some part of the external genitals; they are very apt to extend internally, and are generally not attended with pain or soreness. But this is not always the case; we have seen them, when situated within the labia, and not larger than a bean, productive of great pain. In other cases, they are not painful, the person experiencing inconvenience only from their size.

The color of these tumors is that of the parts on which they grow. Their internal structure is made up of small cysts, containing either serous fluid or purulent matter. They are surrounded by cellular tissue and fat, and occasionally they suppurate; and if they do not heal readily, they are apt to degenerate into troublesome sores.

*Churchill* says, "On many occasions, they are undoubtedly of venereal origin, and arise from the seat of former chancres." We have seen them where there had been no venereal taint whatever.

**TREATMENT.**—Relief is always obtained by cutting them off; and the operation may be performed with the scalpel or the scissors. The wound should always be touched with caustic, to prevent bleeding, as these little wounds bleed profusely, and thereby endanger the life of the patient. When the watery tumor is cut off, it is apt to spring up again, if it is not freely cauterized.

When these tumors are suspected to be of venereal origin, a gentle mercurial course is the only certain remedy, and for this purpose the following medicine may be given :

*Recipe :* English Calomel, one drachm.  
Flour, forty grains.

Add a few drops of water, and form sixty pills. Take one, morning, noon and night, till the gums are slightly swollen, and a copperish taste is produced in the mouth. Continue this course for fifteen or twenty days; and, at the same time, apply the blue ointment to the tumors twice a day, till they all drop off.

During this course of treatment, the patient should live on a vegetable diet, and take but little exercise.

## OOZING TUMOR OF THE LABIA.

This name has been given by *Sir C. M. Clark* to a peculiar kind of tumor, arising from, or growing upon, the labia. This tumor sometimes extends over the *mons veneris*, and its texture is firm, and sometimes lobulated, or divided by fissures. Its color is nearly that of the part from which it grows. It is not edematose, although the neighboring parts are so sometimes.

The tumor seldom rises much above the surrounding skin.

A watery fluid is distilled from its surface and interstices, and the quantity of the fluid discharged varies according to the constitution of the patient and the state of the atmosphere; it being much more profuse when the weather is damp and the constitution of the woman debilitated.

This disease most frequently attacks fat, middle-aged women, who have borne children, or those whose constitutions have been impaired.

The principal symptoms are, an itching of the part, with great heat, and a profuse discharge of watery fluid, but no blood. Occasionally the discharge is acrid, and excoriates the parts with which it comes in contact.

This complaint is not unlike that which is denominated shingles, — a species of erysipelas, — but upon a close inspection, it will be found that the projecting parts are solid, and that they do not, as in the case of shingles, contain a fluid. Care must be taken, also, not to mistake mere excrescences of the labia for this disease.

TREATMENT. — *Sir C. M. Clark* says, “there is but little hope of curing this disease without complete excision of the labia, which he performed in one case.” As palliatives, however, astringent powders may be used.

*Recipe:* Starch, one ounce.  
Sulph. Copper, one drachm.

Mixed. Sprinkle these powders on the parts frequently; or they may be washed frequently with the following lotion:

*Recipe* : Pulv. Oak Bark, one ounce.  
 Pulv. Alum, two drachms.  
 Water. one pint.

Boil the ingredients in the water for fifteen minutes; then strain, and wash frequently with the liquor. Or,

*Recipe* : Green Tea, one ounce.  
 Port Wine, one quart.

Steep the tea in the wine twelve hours; then wash the tumor with it frequently.

The bowels should be kept open with the following medicine :

*Recipe* : Blue Mass, twenty grains.  
 Pulv. Aloes, forty grains.  
 Pulv. Rhubarb, forty grains.

Form twenty-four pills, and take three or four every night at bedtime.

The patient should be in a recumbent posture as much as possible, and the room should be well aired. Her diet should be nourishing, and a little good port wine may be taken in her drink. Cushioned sofas, chairs, or ottomans, should not be used by her as seats, nor should the patient stand much on her feet, as the discharge is always increased in that position.

#### DISEASES OF THE EXTERNAL AND INTERNAL PARTS OF GENERATION.

The structure of the external organs of generation is such as to render them liable to a variety of diseases.

Any disease in these parts naturally excites alarm, however free it may be from danger. Nothing will satisfy a woman laboring under a disease of these parts but the knowledge that it is not one of a *peculiar character*, and that it will not be attended with danger. On this account, it is important, in a work of this description, to describe all the diseases minutely, that the mind may be at perfect rest on this subject; because the peace of the husband, as well as that of the wife, depends upon it; and sometimes the character of both is involved, and not unfrequently the happiness of whole families. Not that the diseases themselves are so often of such character as to be calculated to produce these consequences, but because the diseases of these parts are not understood by the great mass of the people.

Owing to their peculiar organization, inflammation runs rapidly into gangrene, and, in spite of all that can be done, suppuration or mortification will take place. In these cases, much pain is experienced.

When inflammation of the labia terminates in suppuration, the discharge is generally fetid. Parts organized as these are generally granulate more slowly than other parts of the body. Sometimes they become very much enlarged from slight irritation, and a neglect of proper cleanliness, the natural secretions becoming acrid, and producing the most intolerable itching; or at least this may be easily produced by scratching the part; and, if this be continued, they soon become swollen and inflamed. But frequent ablution with cold water will soon remove these symptoms.

The external organs, especially the nympha and labia, are liable to tumors of various kinds. The former is more liable to these forms of disease than the latter, especially when it is preternaturally large. When these bodies become enlarged by inflammation, they are of a purple color, and sometimes studded with a number of tumors resembling warts. From their position, they are constantly liable to irritation, especially in warm weather; and, at other times, a violent inflammation seizes on them, in consequence of their being exposed to cold.

The remedy is, bleeding, a low diet, absolute rest, and the use of the following medicines:

*Recipe:* Blue Mass, forty grains.  
Rhubarb, twenty grains.  
Aloes Pulv., twenty grains.

Form twenty pills. Take four or five at bedtime, and repeat every night, till the inflammation is removed. At the same time, use this wash:

*Recipe:* Sugar of Lead, one drachm.  
Rain or River Water, one pint.

Keep the parts constantly wet with this solution, by wetting soft cloths in it, and applying them frequently. Absolute rest must be enjoined.

If this treatment should not remove the inflammation, and suppuration should take place, be careful that the lips of the vagina do not adhere or grow together. Suppuration will remove those little warts already described. The parts should then be kept clean with Castile soap and water, and they will soon heal.

When these parts are covered with warts, — which is sometimes the case, — exposing them to the air, by keeping the labia apart with adhesive straps, washing them daily with fine chalk and water, letting the chalk dry on them, and then rubbing it off dry, will generally remove them all in a few days. So



essential is moisture to the existence of these warts, that they cannot live without it.

Besides the excrescences just mentioned, these parts are liable to very great enlargements, which sometimes require the knife for their removal; and when this is the case, a surgeon must be called in.

The Bosjesman women, the Persian, the Abyssinian, and Egyptian women, are very subject to this unnatural growth. In some parts of Egypt the operation is frequently performed. It resembles circumcision in the males.

## ABSCESS OF THE LABIA.

When inflammation takes place in the labia, it is with difficulty arrested. The vascular and cellular construction of these parts contributes very much to hasten the suppurative stage; the progress of inflammation is frequently so rapid that it cannot be arrested by the most active means. Matter will form sometimes in a few hours.

At furthest, the inflammatory stage rarely continues longer than three or four days.

The first symptom of this disease is, a heat and burning in the parts, attended with pain in moving the lower extremities, particularly in crossing the legs. When the swelling commences, it increases rapidly, and the parts appear of a livid color.

The patient is feverish, and has loss of appetite and sleep. And, as other diseases of these parts produce great anxiety, so in this case, the patient is apt to apprehend something, and is not easily satisfied, till her fears are allayed by some one in whom she has confidence, especially if she be a married woman.

These abscesses in children, as well as in grown persons, are generally produced by bruises. They frequently occur by sitting down on the knob of a chair, or upon a hard pincushion, or by a fall on a hard substance, &c. A bruise received in this way, or any cause that would excite inflammation in any other part of the body, will excite it in this.

TREATMENT.—The treatment consists in bleeding, purging, a very low diet, and absolute rest.

*Recipe:* Epsom Salts, one ounce.

Dissolve in a glass of water, and take it at a dose;  $\text{oi}$ ,

*Recipe:* Fol. Senna, one ounce.  
Rochelle Salts, half ounce.

Boil the leaves to a strong tea, in which dissolve the salts, and take it at three draughts, half an hour apart; or,

*Recipe* : Rochelle Salts, one ounce.  
Cream Tartar, one ounce.

Mix. Take a tea spoonful every hour, in a glass of cold water, till it operates freely; keep still, and bathe the parts freely with.

*Recipe* : Sugar of Lead, one drachm.  
Dissolved in Water, one pint.

Keep the parts constantly wet with the solution when cool.

If you find that suppuration will take place, apply warm poultices :

*Recipe* : Ground Flax-Seed, two ounces.  
Wheat Bran, two ounces.

with water sufficient to make a poultice; and apply it warm; or a light bread and milk poultice, applied warm, will do.

If the pain be great, give,

*Recipe* : Opium, one grain.  
Camphor, two grains.  
Tartar Emetic, half grain.

If this should fail to procure rest, or should the articles not be at hand, make a strong decoction of poppy-heads, or hop-blossoms, thicken with wheat bran, and apply this poultice, first anointing the parts with blue ointment, if it can be had. This will often relieve the pain.

When the abscess points, and fluctuation is evident, it should be opened by a free incision with a lancet, so that all the matter may be discharged at once. After this, the parts soon heal without any danger of return, unless some exciting cause be applied.

#### EDEMATOSE SWELLINGS OF THE LABIA.

Women of lax muscular fibre, who have borne children especially if they stand much on their feet, are more liable to edematose swellings of the labia than those women of a firm, muscular, and robust constitution.

It is said by some writers on midwifery that those women who have an obliquity of the uterus are more liable to these swellings than those whose uterus is not thrown into a state of obliquity.

It rarely happens that this swelling is confined to the labia; it generally extends to the lower extremities, also, distending them so much that they frequently burst. This produces great alarm

in the mind of the patient, and she is apt to think that she is laboring under the dropsy.

It has been said by some authors, that this condition of the parts indicates an easy delivery; but our own observations on this subject do not favor this opinion.

We, however, never saw the labia burst; but *Doctor Dewees* relates a case "where the labia was ruptured, and ulceration of the perineum ensued, attended, before recovery, with erysipelatous inflammation, and the discharge of a great quantity of ill-conditioned pus, or sanies."

When this condition of the labia is a consequence of gestation, it will sometimes give way before labor comes on; but this is not to be relied on.

**TREATMENT.**—When this disease is attended with fever, the patient should be bled from the arm; she should be confined to a horizontal position, and take the following medicine:

*Recipe:* Rochelle Salts, one ounce.  
Cream Tartar, one ounce.

**Mix.** Take a tea spoonful every hour or two, in parsley tea, and keep the bowels freely open by the daily use of this medicine; or,

*Recipe:* Glauber's Salts, one ounce.  
Salts Nitre, two drachms.  
Pulv. Rhubarb, half ounce.

**Mix.** Take a tea spoonful, dissolved in a small glass of water, and repeat three or four times a day. The diet should be very light, and the patient should lie on a lounge, straw-bed or mattress, all the time, rising to her feet as seldom as possible.

If these remedies should not remove the swelling, the labia should be punctured on the inner surface, in three or four places, with a sharp lancet. This should be done three or four days before labor comes on, that the water may have time to drain out of the parts before the head of the child passes through them. No bad effects need be dreaded from these punctures; but, on the contrary, they will, by reducing the swelling, allow the parts to yield kindly, and thereby prevent their rupture, as well as a laceration of the perineum.

This disease is sometimes consequent on a true dropsical condition of the system; and, when this is the case, no general remedies can be used for its cure, till after the delivery of the child. Nevertheless, if the labia should be much distended, several punctures may be made in it with a lancet, even after

labor has commenced. *Doctor Dewees* says "he has often done this, to the great relief and safety of his patient."

#### ENCYSTED TUMOR OF THE LABIA.

Encysted tumors of the labia are met with of various sizes. They are generally circumscribed and transparent, and they give rise to but few symptoms, except such as arise from their magnitude. But they are very often symptomatic of more important diseases of the uterus.

The color of the skin covering them is rarely changed; but, when opened, they are generally found to contain unhealthy sanies, or dark-colored matter.

They occasionally ulcerate, and form an unpleasant sore. The slow progress of the disease, and the absence of inflammation and of acute pain, will distinguish these tumors from phlegmon of the labia. *Bovin*, and *Duges*, *Sir Astley Cooper* and *Blundell*, all speak of this disease.

**TREATMENT.**—We have the choice of three modes of treatment.

*First.* Simple incision of the tumor, which is sometimes sufficient.

*Second.* The insertion of a seton, to produce suppuration, or obliteration of the sac.

*Third.* The entire tumor may be cut out; and this is probably the best remedy that can be pursued, if anything at all is done.—*Churchill*.

#### PRURITUS, OR ERUPTION, WITH ITCHING OF THE PARTS OF GENERATION.

This is one of the most troublesome diseases to which females are subject.

Ladies in a state of pregnancy are more subject to this disease than those who are not pregnant, but no state will exempt them from its attacks.

It produces such an uncontrollable desire to scratch, that it is with difficulty refrained from. *Dr. Dewees* says, "he knew a case where the itching was so severe that the lady had to keep her chamber for three months;" and he goes on to remark that "every remedy that could be thought of by two eminent physicians was tried in vain. No relief was obtained until after delivery; the parts were not examined; the child was born perfectly healthy. The woman was much exhausted by the severe discipline to which she was subjected in order to obtain relief

Pruritus is not confined to the vulva alone; the vagina also suffers from it occasionally. It has no particular time for making its attack, and may appear at any period of pregnancy, although its attacks are more frequent in the latter than in the early stage. But let it appear when it may, if it is neglected for a while, or if it is not well treated, it is apt to continue till the end of gestation, or till delivery takes place.

This disease is very much aggravated by the want of cleanliness, though no attention of this kind is capable of preventing it, or of curing it after it has come on.

A variety of causes, such as a want of cleanliness, an active secretion within the labia, an inveterate eruption, varicose veins, an apthous efflorescence, &c., have been assigned for this disease. It is certain that in a great many cases a want of cleanliness cannot be its cause, though we are persuaded it is well calculated to increase it after it is once induced. There certainly is a secretion of acrid fluid in all cases of pruritus, be the remote cause what it may; and this secretion certainly renews the itching when it takes place.

There is a discharge of thin limpid serum, of which the patient is perfectly conscious, which secretion always renews the irritation.

*Dr. Dewees* says, "he has not met with any case where varicose veins could be said to produce the disease." The eruption is very much like that of the thrush in a young child's mouth: and this covers the whole of the inner surface of the labia, and sometimes extends within the vagina. When this eruption does not exist, the inner parts are inflamed; the color of the inflammation is that of a copper red, but sometimes inclining to a light purple, with a number of slight abrasions, which increase the irritability of the parts.

**TREATMENT.**—The treatment of this disease depends very much on the habits of the patient. If she is of a full habit, she ought to be bled and purged, and take the following medicine:

*Recipe:* Blue Mass, twenty grains.  
Pulv. Aloes, twenty grains.  
Pulv. Rhubarb, forty grains.

Form mass, and divide into twenty pills. Take three or four of these every night at bedtime; or, occasionally take,

*Recipe:* Pulv. Rhubarb, two drachms.  
Epsom Salts, half ounce.



Mix together, and take a tea spoonful three or four times a day in half a glass of water.

Besides keeping the bowels open with these medicines, the following wash must be used, where the thrush-like eruption appears :

*Recipe* : Pulv. Borax, one drachm.  
Tinct. Myrrh, one ounce.  
Rain or River Water, one pint.

Mix the medicines in the water, and wash the parts freely from three to six times a day ; and, if the eruption has extended into the vagina, the wash should be thrown into the vagina with a womb syringe as often as the external parts are washed. At the same time, take the following drops :

*Recipe* : Balsam Copaiba, one ounce.

Take ten drops of this medicine three or four times a day, on sugar.

The parts are not always covered with an eruption, but are sometimes of a red copper color ; when this is the case, the following wash must be used :

*Recipe* : Sulphate Zinc, one drachm.  
Rain or River Water, one pint.

Dissolve the medicine in the water, and use it as above directed, externally and internally ; or, you may use the following :

*Recipe* : Sulphate of Copper, one drachm.  
Rain or River Water, one pint.

Dissolve the medicine in the water, and use as above directed.

There has been a variety of washes prescribed in this disease, such as brandy, or brandy and water, cold water, ice-water, spirits and water, soap and water, sugar of lead and water, &c. ; and it must be acknowledged that all of these have done good in their turn ; and again, all have failed to perform a cure. The remedies first given here are more to be relied on than any of those washes.

The patient should live on a light diet, under any course of treatment, or a cure cannot be expected.

There is a disease of these parts which has been thought by some to be analogous to this, if not a species of the same disease, and some authors think the former may terminate in the latter. The disease which is supposed to resemble pruritus is called *furor uterinus*. But, according to our observation, no two diseases are further apart in their true character.

Pruritus is always attended with an uncontrollable itching sen

sation, frequently with an aphthous eruption, and always with a diminished inclination for sexual intercourse.

*Furor uterinus* is not attended with an itching sensation, but with an uncontrollably libidinous desire—marks of distinction which are as wide apart as they can be. The two diseases do not partake at all of the same nature.

Pruritus may be communicated to the male from the female, and it is sometimes communicated to the female from the male, as both sexes are liable to this disease, and maidens are subject to it as well as married women.

Much importance is attached to a proper knowledge of this disease, and every female should be well acquainted with its symptoms, so that she may be able to distinguish it from other diseases. We have known both men and women to be under the strongest temptations to believe the other party incontinent, and think that one had contracted the venereal disease and communicated it to the other. An experienced physician will decide this question in a moment, when the symptoms are given.

While writing this chapter, we were called on by a female, in great distress, because, as she thought, her husband had given her the venereal disease. But before she had answered half a dozen questions, we were satisfied that she had not contracted a venereal disease, but was afflicted with pruritus. After fully explaining to her the nature of her disease, she went away perfectly satisfied. By the use of the remedies given in the recipes above, she was soon cured.

#### DISEASES OF THE VAGINA.

The diseases of which we are now about to treat are not common; but, as they occasionally occur, it is proper that they be noticed in a work of this description.

These diseases may be natural or accidental; and the natural may be more properly styled *defects*. These defects consist in abbreviations or contractions of the vagina, so as to render the parts unfit for the purposes for which nature designed them. *Morgani* mentions a case, in which the vagina was only one third the usual length, and terminated in a firm, fleshy substance. It is hardly necessary to say that this woman was barren. *Columbus* dissected the vagina of a woman who always complained of great pain *in coitu*. The vagina was very short, and had no uterus at its termination. *Dr. Dewees* saw a case, in which the parts were so small that it was with great difficulty the

finger could be introduced, even after it was freely lubricated. This patient always experienced pain from connection with her husband, and she had never menstruated. Upon examination, the doctor found the vagina to be not more than an inch and a half long, and, from all appearance, there was no uterus at the end of it. At least, if there was, it was very small and imperfect.

We will describe the method of ascertaining whether there is a uterus attached to the vagina or not. Pass a bougie into the bladder, and one finger, well oiled, into the rectum, and bring the finger and bougie as nearly into contact as possible. If there is no uterus, the finger and bougie will nearly touch each other, being separated only by the coats of the bladder and of the rectum. But if there is a uterus, the substance of it will separate the finger and bougie to such a distance that the operator will be satisfied of its presence. Any one acquainted with the anatomy of the parts cannot be mistaken, and any substance in the cavity of the pelvis may be in this way detected. If there is no uterus, the question is at once settled that the woman is not perfect. But if there is a uterus, although the parts may all be very small, and the vagina short and contracted, we have a remedy. And this consists in the use of tents, made of slippery-elm bark, oiled silk, or fine sponge, well wrapped and oiled. Any of these tents may be passed into the vagina, and retained there by a bandage in the form of the letter T, for ten or twelve hours each day. Let them be a little larger every day, till the parts are sufficiently expanded.

Be careful to keep down inflammation by bleeding, low diet, and gentle medicine; such as,

*Recipe*: Rochelle Salts, one ounce, for a dose.

*Recipe*: Fol. Senna, one ounce.  
Manna Flake, half ounce.

Boil to a strong tea, and taken at three or four draughts, half an hour apart; or,

*Recipe*: Castor-Oil, one ounce, for a dose.

*Recipe*: Scammony,  
Pulv. Aloes,  
Pulv. Rhubarb, — of each twenty grains.  
Tartar Emetic, one grain.

Form twelve pills. Take three or four for a dose, and repeat every day till the cure is performed.

The smallness of the vagina does not always prevent conception, nor does it argue that delivery will not be safe, though it

may be tedious. The remedy for this state of things is given in the chapter on delivery.

TRANSPARENT DISCHARGE OF MUCUS FROM THE VAGINA ARISING FROM  
AN INCREASED ACTION OF THE VESSELS.

Women of naturally plethoric habits, who possess great strength of constitution, are more liable to profuse secretions from these parts than women of ordinary strength, and this discharge may become so profuse as to demand attention.

Women who in the middle stage of life indulge much in the luxuries of the table, particularly if they use wine or spirits, and whose habits of life are sedentary, taking very little exercise in the open air, are liable to become suddenly corpulent. They form a large quantity of blood; the pulse becomes full, and the blood-vessels show very plainly on the cheeks. Such women are generally weak, though they may have the appearance of strength. They can take very little exercise without fatigue, and are apt to lose their energies; the liver may enlarge; the stools become light-colored and fetid, and the patient now becomes of a costive habit. The transparent mucous discharge is increased in quantity; she menstruates more profusely, and the periods return too soon; she has fits of giddiness, sleeps badly, has pain in the head and indistinct vision at times, attended with the appearance of sparks flying before her eyes either when they are shut or open.

More or less of these symptoms may last for many years, till at last the patient is suddenly attacked with apoplexy, or some internal hemorrhage, which may quickly destroy her; or she may gradually become weaker and weaker, till finally she may take the dropsy.

It is proper to notice here that these symptoms abate after each menstruation, and this is one cause why the woman puts off calling for advice. But there is danger in procrastination.

The liver in these cases is always enlarged, and secretes badly.

**TREATMENT.**—The first remedy in these cases, when the pulse will bear it, is to bleed freely from the arm. But if the lancet cannot be used, cups should be applied between the shoulders, or over the region of the liver, as well as on the loins or abdomen, according to the seat of the greatest distress. The patient should next take,

*Recipe: Epsom Salts, one ounce.*

Divide into three doses, and take one every three hours, till it operates well.

But if there is pain or uneasiness in the region of the liver, give,

*Recipe* : Calomel, fifteen grains.  
Pulv. Rhubarb, ten grains.

Form six pills, and give three first, and the other three in three hours; work them off with gruel or rice-water. Particular attention should be given to the bowels, and they should be kept open; and, for a constancy, the following purgative will be good :

*Recipe* : Scammony,  
Aloes Socotrine,  
Pulv. Rhei,  
Castile Soap, — of each thirty grains.

Form thirty pills, and take three or four of these; or just as many, at bedtime every night, as will operate once or twice the next morning.

The diet should be of the lightest kind, and entirely vegetable.

If the discharge is very profuse, a wash should be used.

*Recipe* : Sugar Lead, one drachm.  
Water, one pint.

Dissolve the lead in the water, and inject two or three times a day. Sexual connection must cease till the cure is performed.

As soon as the patient is able, she should take exercise in the open air, in a carriage, on horseback, or on foot.

All stimulants should be avoided in all after life.

#### TRANSPARENT MUCOUS DISCHARGE FROM THE VAGINA ARISING FROM DEBILITY OF THE VESSELS.

The disease treated of in the preceding chapter is liable to terminate in this. There are, therefore, more cases of transparent mucous discharge from the vagina arising from debility than from increased action.

Women who live in a moist atmosphere and breathe an impure air, who sit up and lie in bed late, and whose rooms are kept hot and badly ventilated, are most liable to this form of the disease. Allowing the child to suck too long is also one cause of this disease; and, when this is the case, it will generally subside when the child is weaned.

The quantity, as well as the consistence, of this discharge, is various, being sometimes thin, and in other cases ropy. The woman experiences great pain in the back, attended with great



debility, she loses flesh, and becomes thin and pale; the skin assumes almost the appearance of a dead body, and, in many cases, becomes yellow, as if the patient were jaundiced, although the pearly white of the eye, and the clearness of the urine, assure us that she is not so. The muscles become soft and flabby; the legs and feet swell towards night, but the swelling disappears by morning. The face also becomes swollen; the patient has a shortness of breathing, which is increased by lying down; she experiences much difficulty in walking up stairs, or up hill; and she cannot read aloud without rendering her breathing difficult. She is liable to have violent palpitations of the heart, and at times the strokes of the heart are so loud that they can be heard at the distance of several feet. In this stage of the disease, the patient is liable to faint, and is apt to think that she is dying; her hands and feet are generally cold, her pulse is feeble and quick, her appetite fails, she is costive, and her stomach and bowels are filled with wind. Hectic fever now comes on, her breathing becomes more difficult, and she dies with all the symptoms of dropsy of the chest.

**TREATMENT.**—The first step towards the cure of this disease is, to place the patient in a healthy situation; otherwise, a cure cannot be expected. She should go abroad, and take the pure, healthy air; she should live and sleep in a large, well ventilated room; her habits of life must be regular; and she must retire and rise early. If she is too weak to sit up all day, she should recline on a sofa or lounge, and take excursions on horseback, in good weather, or ride out in an open carriage; but she should not travel much on foot. If she is not able to take exercise in either of the above ways, she may take it on a chamber horse, made of a spring plank.

Her diet must be of the lightest kind, and but little should be taken at a time. When the stomach will digest very light diet, she may begin to take a little light animal food; but the meats taken should be of full-grown, and not of young animals, the old being easier of digestion. All wines and spirits should be carefully avoided.

The bowels are to be kept open with the following medicines:

*Recipe:* Pulv. Rhubarb,  
Castile Soap,—of each twenty grains.

Form twelve pills; of which, from two to four may be taken every night, so as to give one operation the next morning. The following tonic may be given:

*Recipe* : Pulv. Gentian Root, half ounce.  
Pulv. Columbo Root, half ounce.

Mix. Put these powders into a pint of hot water, and simmer it slowly for fifteen minutes; strain, and give a table spoonful of the decoction every hour, in cold water. Ten or twelve drops of *elixir vitriol* may be added to each portion just before eating.

As soon as the stomach will bear it, she may take,

*Recipe* : Carbonate Iron, one drachm.  
Sub. Carbonate Soda, one drachm.

Mix, and divide into twelve powders; take one, morning, noon and night, in sugar and a few drops of water. After a few days, the portion may be increased to double the quantity at a dose, if the stomach will bear it.

An excellent bitter may be made of the following:

*Recipe* : Yellow Poplar Bark, one ounce.  
Red Dogwood Bark, one ounce.  
Wild Cherry Bark, one ounce.

Take them all from the root; put them into a quart of water, and boil down to a pint, leaving the cherry to be added to the tea after it is boiled and strained. When the cherry bark is added, a gill of spirits should also be poured into the tea, and old rye whiskey is the best. Of this mixture, a table spoonful may be taken three times a day.

These remedies must be persevered in. The vagina should be washed three times a day, with sugar of lead and water, one drachm to the pint; or alum-water, one and a half drachms to the pint of rain water.

As the patient gains strength, she should take exercise on horseback; but sexual intercourse should be avoided till the cure is complete.

#### CESSATION OF THE MENSES.

The cessation of the menses is very justly considered by all women as an important period of life.

In this country, the change generally takes place between the age of forty-three and forty-seven; but sometimes it takes place much earlier. We are, however, not without evidence, in some of our books, that the catamenia has continued to the protracted period of seventy years,—but this is very uncommon,—and that, too, without any variation in quantity, quality, or regularity.

It is a proverbial saying, that women who live in the country, and attend to the active duties of life, suckle their own children,

rise early, and live on a plain diet, pass through this stage safer and better than those who live in towns and cities, and indulge in the luxuries of life, lie in bed late, and retire late, and do not suckle their children.

The approach of this change is often announced by a little irregularity in the returns of the catamenia; sometimes they come on every two weeks, and then they may miss for six weeks or more. Sometimes they are deficient in quantity, but continue the full time; the next time they may be so profuse as to weaken the patient. But, most commonly, when the woman lives in the country and is governed by country habits, she passes through this period with the knowledge only that it is gone. She ceases to menstruate, and no bad consequences follow. But when unnatural indulgences are practised, she may be involved in many difficulties, such as being subject to profuse discharges, which may weaken her very much, and even endanger life.

When the uterus takes on a degree of inflammatory action, accompanied by heat, and the discharge is copious and lasts long, it is time to use remedies.

**TREATMENT.** — The bowels should be kept open with,

*Recipe:* Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap, — of each twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills, and give two or three every night at bedtime, so as to keep the bowels always regular and purged a little; or,

*Recipe:* Rochelle Salts, one ounce.  
Calcined Magnesia, half ounce.

Mix, and take a tea spoonful or two every night at bedtime. Keep the parts clean by frequent washings with a womb syringe; use cool or tepid water, and be careful not to take tonics, for fear of becoming too weak. It would be advisable to take a purge, to reduce arterial action, but no stimulants of any description must be taken. Rise early, and take exercise in the open air.

The diet should be plain, and entirely vegetable. Use no meats, rich dressings, or gravies. Take no more at a time than the stomach will properly manage without uneasiness; avoid everything that is calculated to excite or agitate either body or mind, as grief, fear, joy, passion, &c.

If the patient be fleshy, she should be bled occasionally from

the arm. By attending to these directions, the period may be passed over with all possible safety.

#### OF CHRONIC INFLAMMATION OF THE GLANDULAR PORTION OF THE OS UTERI.

All the diseases of the membrane covering the os uteri, or the cervix uteri, produce, in their active stage, a greater or less discharge.

The discharge in this disease differs from that of leucorrhœa, and the suffering is more intense. The peculiarity of the discharge, and the state of the os uteri, will clearly distinguish this from the other diseases of these parts which we have described.

The principal symptoms are, an aching sensation in the back and lower part of the abdomen, which is rendered more severe by increasing the action of the abdominal muscles, or by pressure of any kind. Sexual intercourse is productive of more or less pain, and is often the first circumstance that excites the attention of the patient.

The bladder and rectum are frequently irritable in this disease, and sometimes the functions of menstruation are disturbed; but most generally they are not. The discharge from the vagina is perfectly white and opaque, resembling starch and water, when mixed together, without heat. It is easily removed from the finger after examination, and it renders the water in which the finger is washed turbid. In many instances the white discharge is thick, resembling glue in tenacity, and this is probably its natural state; but by remaining in the vagina for some time, and mixing with the natural mucus of that part, it changes its appearance.

On examination, nothing unusual is found in the vagina; but when the finger reaches the os uteri and cervix, which feel swollen, the patient complains of severe pain on pressure. The discharge, as above described, may occur, and no puffiness of the cervix uteri be detected. "Judging from the local symptoms generally present, and from the resemblance which this white discharge has to the secretion from the glands in the mucous membrane of the neck of the womb under other circumstances, Sir C. Clark concludes that it is this glandular apparatus which is the seat of inflammation in this case." Mitchell says, "There are seldom any constitutional symptoms present."

The causes of this disease are not, at all times, easily ascertained; generally, however, it proceeds from abortion, cold, exces-

sive exercise, irregular habits of life, or a sudden suppression of the menses. If the discharge be copious, and the mouth or neck of the womb very tender, and menstruation painful or difficult, the case, if let alone, may ultimately become serious.

All women, while laboring under this disease, are barren.

TREATMENT.—Depletion of the parts is the first thing to be attempted, and this is best performed by leeches to the part, cups to the loins, or leeches to the insides of the thighs; and this application should be repeated, if necessary. The hip bath should be used twice a day, and should immediately follow the loss of blood. Warm water should be thrown into the vagina two or three times a day, with a womb syringe, and this remedy will always give relief.

After the use of warm water as an injection, the following should be used:

*Recipe*: Sugar Lead, one drachm.

Dissolved in one pint of tepid water, of which two or three syringefuls should be used after each washing with warm water. The bowels should be kept open with gentle purgatives, such as,

*Recipe*: Scammony, one drachm.  
Aloes Socotrine, one drachm.  
Pulv. Rhubarb, one drachm.  
Castile Soap, one drachm.

Form sixty pills, and give from two to four every night at bedtime, so as to act gently on the bowels every morning.

The urine is sometimes obstructed; and, in that case, twenty drops of laudanum, in flax-seed or slippery-elm tea, should be given; and if this should not afford relief, the water should be drawn off with a catheter. During the cure, the patient must keep still, lie on a mattress or sofa, and live on a very light and thin diet. All sexual intercourse must be interdicted till the cure is completed.

When the inflammation is all removed, in order to establish the cure, and give tone to the parts, and regulate menstruation, the following medicine should be given:

*Recipe*: Citrated Aromatic Wine of Iron, four ounces.

A tea spoonful should be taken three times a day, in sweetened water. At the same time the bowels must be kept open with the above pills.



OF CHRONIC INFLAMMATION OF THE MOUTH AND NECK OF THE WOMB,  
AND HOW TO PREPARE AND USE THE INSTRUMENTS REPRESENTED IN  
PLATE V. IN THIS DISEASE.

There are to be seen, in the same plate, two representations of the mouth and neck of the womb, figures 1 and 2. These plates show the neck and mouth of the womb in different states of disease, though produced from the same cause, namely, cold, or abortion.

Figure 1 shows the mouth and neck of the womb in a state of chronic inflammation, which has taken place, first in the neck of the womb, and contracted the surface so as to act as a ligature upon the vessels, while the membrane covering the lips has not contracted so much. Consequently, the lips have protruded, and, remaining in this situation for a long time, the inflammation has become chronic. The parts are tender to the touch, and the woman menstruates with difficulty.

Figure 2 shows the same condition of the parts, except that the contraction has covered the whole surface, both neck and mouth, of the womb, and reduced them both more than figure 1. We have often met with both of these conditions of these organs. Some authors in our late periodicals have spoken of this disease, but so slightly that nothing satisfactory can be gathered from them. They, indeed, prescribe the use of caustic in many diseases of the os and cervix uteri, but the manner in which they direct it to be applied we have found to do more harm than good.

Some writers on the subject have directed it to be applied by making a solution of it in water, and applying it with a sponge, tied on a whalebone; others direct it to be used as a wash, with a syringe; while others, again, direct it to be used as a pencil, through a speculum. All of these modes we have found to be very objectionable. To avoid this objection, we constructed these instruments, figures 3 and 4, and 5 and 6. To prepare these for use, they should be taken to pieces by loosening and taking off the screws, and be properly cleaned with a piece of buck-skin or soft flannel. The bowl of the spoon, figures 4 and 6, should then be filled with pulverized lunar caustic, and melted down by a spirit lamp. The bowl should be filled again and again, and as often melted down, till it is full; when the instrument should be put together, and screwed up tight, with the caustic hid in the bowl of the canula. The patient should then be placed in the position for turning a child,—which chapter see,—and the oper-

ator pass the forefinger of the left hand to the os uteri; and, after straightening the uterus, and bringing the mouth into a proper position to receive the instrument,—it being previously oiled,—he passes it up to the neck of the womb, placing the caustic in a position to rest upon the neck of the womb, while the vagina is guarded by the back of the bowl of the instrument. He then loosens the screw on the wire at F, and shoves the wire upward, or draws the canula downward, till the port caustic is unsheathed; then, keeping the caustic close to the surface of the neck of the womb, passes the caustic entirely around the neck of the womb, touching every part of its surface, and nothing else. He then draws the port caustic or wire into the canula, and removes both from the vagina.

If the lips of the womb are contracted or pouted,—and they are almost sure to be in one or the other condition,—having the instrument, figure 3, prepared, the operator introduces it as he did the other; and, placing the round knob of the port caustic, on the short end of the bowl, in one corner of the mouth of the womb, he passes it completely over the whole surface of the lips of the womb; then, as before, sheathes the port caustic, and withdraws it from the vagina. In this operation, no part is, or should be, touched with the caustic, but the exact spot which may be diseased. The surface of the parts touched will peel off in thin, dark-looking scales or flakes; but the parts are not left raw, although a little tender, and, of course, slightly inflamed; but, as the opposite surface is not in that condition, they will not adhere together; and, even if they were so disposed, the mucilaginous wash, directed after the operation, will prevent that occurrence.

The operation may have to be performed several times before a cure can be effected; but it will succeed, if properly performed.

The application of caustic by these instruments possesses an advantage over all the methods we have seen prescribed. *First*, no part is touched but the one diseased. *Second*, it touches every part that should be touched; and, without this instrument, you can neither avoid the one nor effect the other; not even with the speculum, with all its boasted utility and exposure of the patient. In using these instruments she is not exposed in the least.

As these instruments are not yet generally brought into use, and as the speculum is the only one that can be obtained till these are made, that instrument must therefore be used, and the

parts lightly touched all around with a strong solution of caustic, applied by a mop of cotton on a small stick. The parts should be carefully touched in this manner till the surface becomes white and smooth; then the case should be treated as if Bright's instruments had been used.

In the above cases, it will always be prudent to prepare the system before performing the operation; and, in doing this, every secreting organ that is in health must be made to perform its healthy functions. The liver, pancreatic gland, kidneys, &c., should all be brought in as healthy a condition as possible. In order to obtain this point, if the patient is fleshy and full of blood, she should be bled from the arm, and then take the following medicine:

*Recipe:* Blue Mass, twenty grains.  
Aloes Socotrine, ten grains.  
Pulv. Rhubarb, ten grains.

Form six pills. Give these at bedtime, and repeat them every night, till the liver acts freely and in a healthy manner, when the following pill should be given for a few nights before the operation:

*Recipe:* Scammony, twenty grains.  
Pulv. Rhubarb, twenty grains.  
Aloes Socotrine, twenty grains.  
Castile Soap, twenty grains.  
Tartar Emetic, three' grains.

Form twenty-four pills. Give three or four of these every night for three nights; the operation should then be performed, after which the vagina must be washed out with slippery-elm tea twice a day, using the womb syringe. The bowels must also be kept open with the last-mentioned pills.

The patient must live on a vegetable diet for six or eight weeks, and avoid all fatiguing exercise; her drink should be cold water.

The operation should not be repeated oftener than once a month, and then eight or ten days after menstruating.

After all the chronic inflammation has been removed, and the neck and mouth of the womb feel soft and healthy, if she does not menstruate sufficiently, give the following pills:

*Recipe:* Burnt Copperas, two drachms.  
Borax, one drachm.  
Aloes Socotrine, one drachm.  
Flour, a small quantity.

Form forty-eight pills, of which she should take one, morning, noon and night, for one week; when she should take two

at each time, till the month is out; and if she does not then menstruate freely, she should continue another month. By using these instruments and these medicines, we have either cured, or greatly relieved, all the patients we have treated for this disease for the last five years; and these have not been a few, including some ladies who have been married for ten or fifteen years and remained barren, but who have, since the above operations, borne fine children, and thus proved the cure to be complete. We are persuaded the remedy will rarely fail, if the operation is properly performed, and the directions properly followed.

We will here direct the use of the instrument in fig. 7. Press the thumb-nail upon the steel spring *c*, — the stiletto can be drawn back so as to hide the lancet point, — in which condition it is passed to the membrane over the mouth of the womb; and, placing it on the dimple felt in that membrane, shove the stiletto forward till the spring rises. You then push the lancet point through the membrane, and move it a little to the right and left, till it makes an orifice of about one quarter of an inch wide; you then withdraw the instrument, and pass a small bougie half an inch into the neck of the uterus. This bougie must be passed every other day for three or four times, till the parts heal, and the difficulty as it respects the membrane is removed. Many females die from having the menses obstructed by this membrane, and the true cause of their death is never known. We have not as yet failed effectually to remove that difficulty with this instrument.

All three of the above diseases may be, and are, very often, produced by cold, taken by imprudence in dress, or exposure to wet or cold, during menstruation. The injury thus done may not be detected for years, unless they should marry.

Abortion may lay the foundation of it in married women, as also any of the causes that may produce it in girls.

The closing of the membrane rarely takes place except in girls, and is then only made known by an obstinate obstruction of the menses, and its long train of symptoms, which cannot be removed by other remedies.

#### OF GRANULAR INFLAMMATION OF THE MUCOUS MEMBRANE OF THE CERVIX UTERI.

This disease is not described by the older writers on diseases of the uterus, for the best of reasons. The speculum is but of

recent date, and, without its use, this disease cannot be accurately ascertained or described.

These granulations, which may be seen on the labia of the os uteri, and on the external surface of the neck of the womb, are the result of acute or chronic inflammation, which two forms differ from each other very considerably. The granulations resulting from acute inflammation are few, and about the size of peas, firm and whitish; they are, however, more frequently small, resembling white mustard-seed, soft, and in great numbers. They look like small blisters, but contain no fluid; but, when touched with the finger, they are apt to bleed a little. Hard straining at stool will also cause them to bleed.

Those granulations produced by chronic inflammation are generally small, hard, and whitish, but sometimes red and soft. They grow from the cervix or neck of the womb.

The causes of this disease are, in many cases, extremely obscure. In some cases, it may be referred to a derangement of the catamenial flow, or to cold taken during its continuance, or after abortion; while, in other cases, it appears to follow syphilis, or some discharge of the skin. It not unfrequently coëxists with a hardness of the neck of the womb, which will be noticed in another chapter.

Without the use of the speculum, it is almost impossible to ascertain precisely the nature of this disease. The touch must be very acute and delicate to detect it fully, because the large granulations are soft, and the hard ones very small. It therefore requires the greatest care to decide by the touch of the finger.

**TREATMENT.**—In the acute stage, bleeding by cups on the loins, warm baths, and injections of warm water into the vagina, are proper. Gentle, cooling purgatives should also be used, such as,

*Recipe:* Senna Tea, half pint.  
Rochelle Salts, half ounce.

Dissolve the salts in the tea, and give it at three draughts, one hour apart. Injections of flax-seed tea may be used three times a day; but, in the chronic form of this disease, bleeding is rarely necessary.

Astringent injections have been recommended by various eminent writers on this subject. These have been composed of all the astringent gums and mineral salts, alternately. Tonics of various kinds have also been recommended, and especially the mineral tonics, as well as counter irritation by blistering the



sacrum; all of which remedies we have used repeatedly for twenty-five years, but generally without success. We therefore resolved, about five years ago, to apply the caustic directly to the part affected, but had no instrument by which to convey it thereto without touching some other part. After being foiled in various attempts to make the application with a sponge, and by injections with a syringe, we constructed the instrument in plate 5, and by its use were enabled to apply the caustic immediately to the part without touching any other.—(*See Directions for the use of the instrument.*)

The caustic should be applied by a light touch, and the port caustic returned into the sheath, and withdrawn from the vagina. The parts will feel a little sore for a day or two, and they should be washed, in six hours, with slippery-elm tea, which should be repeated three times a day, for six days.

In applying the instrument to the neck of the womb, the caustic should be turned towards the neck, and the back of the instrument next to the cavity of the vagina; then unsheathe the port caustic, by turning the screw at the outer end of the instrument, and withdraw the sheath. This leaves the port caustic naked at its curved end; you then direct it with the forefinger of the left hand all around the neck of the womb, making it fit closely: draw it then into the sheath, and withdraw it from the vagina.

If the os uteri be studded with tumors, you then introduce the instruments 3 and 4, and when it is conducted to the os uteri by the finger, you unsheathe it as you did the first, and placing one of the ends, or round knobs, in one corner of the mouth of the womb, you gently, but steadily, pass it round the mouth of the womb, embracing the lips completely, from corner to corner, till you reach the point from whence you started. You then sheathe it again, and withdraw it.

The operation should be performed only from one to two weeks after menstruation. It may, however, be repeated as often as you find it necessary, but only once a month, till the cure is performed; always using the slippery-elm or flax-seed tea wash, afterwards. This will effectually prevent the adhesion of the vagina to the part touched; for the cuticle always comes off, and if the wash be neglected, inflammation may take place, and adhesion follow. But where the wash is used as it should be, and the patient keeps her bowels open, and lives on a light diet, no danger can occur from this source.

This remedy effectually removes the tumors, prevents bleeding, and restores the healthy action and functions of the uterus. Sexual intercourse must be interdicted for two weeks after the operation, each time; and the patient should keep still, live light, and keep the bowels open. The following pill will answer very well:

*Recipe:* Scammony, ten grains.  
 Aloes Socotrine, ten grains.  
 Pulv. Rhei, ten grains.  
 Sapo Castile, ten grains.  
 Ground Ginger, twenty grains.  
 Tartar Emetic, three grains.

Form thirty pills. Take from two to four every night, so as to keep the bowels open.

#### OF POLYPUS OF THE UTERUS.

Polypus of the uterus is an insensible tumor attached to the internal parts of this organ by a small neck, constituting a disease of a very important character. These tumors vary in appearance, shape, and degrees of hardness, being sometimes nearly white, and at other times of a brownish color. At times they are hard and resisting, and at others soft and yielding, not admitting of the application of a ligature without breaking to pieces. When they are hard, they partake more or less of the shape of the parts in which they lie.

The os uteri always contracts the neck of the polypus, but the tumor spreads out below, within the vagina. The hard is of more frequent occurrence than the soft species of polypus. Dr. Clark says, "the soft polypus resembles a portion of brain more than anything else;" and it may be removed with the finger. Both single and married women are subject to the polypus of the uterus. The tumor, when removed and cut open, shows the same appearance internally that it does externally, and sometimes grows so large as to fill the cavity of the pelvis. When the cavity of the uterus is filled with one of these, or the os uteri begins to dilate, to admit the descent of the tumor into the cavity of the pelvis below, great irritation and suffering are often felt by the patient, though the tumor is not large enough to fill the cavity of the uterus.

Nothing certain respecting the cause of these tumors is known. They arise in women otherwise healthy, and whose uterus has not suffered any violence.

The symptoms which characterize the disease are, *first*, a

mucous discharge from the vagina, in considerable quantities, mixed with blood; in consequence of which, the patient becomes very much debilitated before the true nature of the disease is ascertained. Large lumps of clotted blood are discharged from the vagina, and the coagula are sometimes in a ring-like shape. At other times the blood discharged from the vessels remains in the uterus till it becomes putrid; and mixing with the secretions, tinges them brown, rendering them at the same time very offensive. The patient has sick spells occasionally.

This disease has sometimes been mistaken for cancer of the uterus, but an examination by the vagina will decide this question.

A sense of pain and bearing down attends this disease, and these symptoms are proportioned in degree to the size and weight of the tumors. The patient has pain in the back and groins, accompanied with a sensation of pressing down, like that of a dragging weight.

The tumor sometimes grows so large and fills the vagina so entirely as to press hard upon the rectum and neck of the bladder, and thus partially obstruct the passage both of stools and urine. The tumor, however, rarely grows thus large, before its true nature is ascertained and the proper remedy applied. A sympathy is sometimes created between the uterus and the stomach, and vomiting is excited.

Here, then, from one cause, three or four symptoms are produced; as great weakness, an increased secretion of mucus, hemorrhage, and vomiting, with a derangement of the digestive powers; all of which reduce the patient's strength. When enough of the above symptoms present themselves to satisfy the patient that something more than common is the matter, she should immediately submit herself to the examination of a skilful physician. He will discover an insensible tumor projecting through the os uteri, by which its neck is entirely encircled, so that the finger can be completely passed round the tumor and within the mouth of the womb.

The only diseases that can be mistaken for polypus of the uterus are prolapsus uteri and the cauliflower excrescence, both of which are described under their proper heads.

A polypus is insensible to the touch, but an inverted uterus is sensible to the touch. The cauliflower excrescence is irregular on its surface, and discharges a great quantity of watery substance.

It does not grow within the uterus, but is attached to the outer surface of the neck of the womb.

If these symptoms and positions be compared together, there can be no difficulty in deciding on the existence of polypus.

TREATMENT.—There is but one remedy in this disease, and that is to remove the polypus. When it is soft, it may be taken away by the finger; but when it is hard, a ligature must be applied around it, in order to remove it.

If the patient's situation be not examined, and the physician is content to treat symptoms only, she will inevitably die, as no medicines can cure this disease till the tumor is removed. Severe vomiting has, in a few instances, ruptured the neck of the polypus, and it has fallen away, and thus the patient has been cured; but this does not occur once in a hundred times.

The operation for this disease is not dangerous; and, therefore, we may promise the patient a safe recovery.

Previous to applying the ligature, the patient should keep the bowels open for several days with the following medicine:

*Recipe*: Scammony,  
Aloes Socotrine,  
Pulv. Rhubarb,  
Castile Soap,—of each twenty grains.

Form ten pills, and take three or four every night at bedtime, so as to operate twice the next day.

The diet should be very light, and immediately before the operation, an injection of thin gruel, lard, and salt, or of molasses and warm water, should be used. After this is done operating, the patient should be kept in an upright posture for some minutes, and she may walk the floor, so as to bring the tumor as low down as possible.

When the operation is to be performed, she should be placed on her left side on the bed, with her knees drawn up towards her abdomen. The operator having two or three long, strong, silk ligatures, well waxed, should pass one of them through a double canula; then pass, with one finger, the double over one side of the polypus, while he carries the other part up with the canula, till he reaches the neck of the tumor. He should then tighten it a little, frequently asking the patient if she feels pain; and if she does, he should loosen the ligature a little, and then tighten it again, till she feels no pain from it. He should then gently remove the wire, and draw the ligature tight, till it is firmly fixed; fasten the outer ends around the little knobs of the canula,

gently pushing up the flat slide on the canula, till it reaches the top of the instrument, or the little round piece on the top. Let the canula remain in the vagina; keep the patient on the left side, and caution her, when she rises to make water, not to remove the canula, or press it in any way. Keep the bedclothes from touching the canula; tighten it a little every day, till it cuts through the neck of the polypus, when it may be withdrawn, and the polypus taken away, either with the fingers or the forceps; wash the vagina out with warm water. Let the patient live on a light diet, and keep her bowels open, and she will soon recover.

It will take, according to the size of the neck of the polypus, from three to ten days to cut it off with the ligature; after which, she may use a more generous diet, and take exercise according to her strength.

Some strengthening medicine may be given.

#### CORRODING ULCER OF THE UTERUS.

We have seen but one case of this formidable disease in thirty years' practice, and, therefore, must depend principally upon what others have said. in our remarks upon it.

It is not unusual for women to refer all extraordinary sensations arising at the time of the cessation of the menses to what they call the change of life, and to consider, when they have thus accounted for their diseases, that they have, at the same time, cured them.

According to all the authorities which we have seen on this subject, this disease never occurs till the menses cease. In the place of the menses, a yellowish discharge escapes; trifling, perhaps, in quantity at first, with now and then a streak of blood mixed with it. There is in the uterus a sense of warmth at this time, and by degrees this warmth increases into a glowing heat, affecting the region of the uterus. *Dr. Clark* says, "It is not uncommon for the patients to state that they feel as if a hot coal of fire was within them;" and when this is the case, ulceration is in full force. The quantity of the discharge increases with the increase of this sensation, and these symptoms show that the ulceration is extending more rapidly. The countenance becomes pale, and the patient very weak.

In corroding ulcers, keen lancinating pains constitute no part of the symptoms. We do not mean by this that the patient feels



no pain; a sore on any part of the body will give more or less pain. But we would say, that the pain is nothing when compared with that of cancer of the uterus. In this disease when the ulcer is touched with the finger, the patient does not feel pain, but says she feels a soreness; and sometimes there is a profuse bleeding from the uterus, from the corrosion of a large blood-vessel. Should she not die from this cause, she will probably live much longer than she would with cancer of the uterus.

**TREATMENT.**—This disease is produced by inflammation of the neck of the uterus or membranes; and the proper time to use the efficient remedies for its cure is when the inflammation is in the incipient stage. After ulceration takes place, a cure is rarely performed.

When the menses have ceased, and a sense of heat succeeds in the womb, with a discharge of yellow matter attending this heat,—or if there is no discharge, but a continued sense of a gradually increased heat,—the patient may feel herself fully authorized to use the remedies prescribed below. The first thing to be done is, to apply several cups high up on the inside of the thigh, and draw as much blood as the patient feels able to lose; and this should be repeated every eight or ten days. The hip bath should be used, a little cooler than the blood; and, while in the bath, some of its water should be thrown into the vagina with a womb syringe. This should be repeated every day.

The bowels should be kept open with some cooling purgative, such as,

*Recipe:* Epsom Salts, one ounce.

Dissolved over night in a glass of water, and allowed to stand till morning, when the clear fluid should be poured off, and taken at two or three draughts during the day; or,

*Recipe:* Rochelle Salts, one ounce.

Dissolved in a glass of water, and taken at two draughts three or four hours apart; or,

*Recipe:* Rochelle Salts, half ounce.  
Calcined Magnesia, two drachms.

Mix them in two portions; take one in the morning, and the other in the evening. Or take,

*Recipe:* Tartar Emetic, one grain.  
Clear Water, half pint.

Dissolve the tartar in the water, and take a table spoonful

every two hours; and do this from day to day, as long as your strength will allow, or until the heat of the uterus is removed.

If the disease has been neglected, or not apprehended, till ulceration has taken place, the same medicines may be used, with the addition of an opiate taken at bedtime occasionally, to procure rest, and also an injection of slippery-elm tea daily. An injection of the following medicine may also be used once a day :

*Recipe :* Nitrate of Silver, twenty grains.  
Rain Water, one pint.

Dissolve the medicine in the water, and use it once a day, with the syringe. After using the warm water as above, if hemorrhage should come on so as to reduce the strength, use this injection :

*Recipe :* Pulv. Alum, two drachms.  
Blue Vitriol, half drachm.

Mix. Dissolve in a pint of rain water, and inject it freely two or three times a day, till the bleeding is stopped. If the patient be very weak, give the following tonic :

*Recipe :* Gentian Root, half ounce.  
Columbo Root, half ounce.

Make them fine, and simmer them slowly, in a pint of water, for fifteen minutes; strain the liquor off; keep it cool, and give a table spoonful every hour or two.

If there is no fever, a little good port wine may be added; but the diet should, in every stage, be altogether vegetable. If the ulceration is extensive, no cure can be expected.

This must always be attended to in the first stage, if you expect to effect a cure.

#### CANCER OF THE UTERUS.

Fortunately for the female, cancer of the uterus is of rare occurrence. It is, however, occasionally met with.

There are many cases of disease of the uterus that are supposed to be cancerous which are not so, and it is a little difficult, at all times, to detect a cancer of the uterus in its early stages, especially when it is situated in the neck of the womb. It so much resembles some other diseases that we cannot always decide on the first examination whether it be cancer or not. The neck of the womb is liable to a variety of diseases, many of which resemble cancer in some of their symptoms; and yet they are not cancer nor cancerous.

The only way in which this disease can be decided on correctly

is, to look at it through a speculum, an instrument made for the purpose of examining the neck of the womb. The touch is not always certain in these cases; it is, however, very important in one respect, for by it the existence of those small irregularities on the surface of the neck of the womb,—standing, as it were, like small shot, or peas, embedded in the substance of the flesh,—is ascertained. These cannot always be felt distinctly; but, in all cases, the tumor which is felt is hard, resembling a piece of gristle imbedded under the skin or outer membrane of the uterus. The lumps thus felt are not smooth on the surface, nor do they extend all round the neck of the womb, occupying the whole circle of the mouth of the womb. Generally, only one of these tumors can be felt distinctly.

Women who are attacked with this disease while they menstruate are liable to have profuse discharges; at each menstruation all the other symptoms are partially relieved for the time being. In the first stages of cancer, there is generally a profuse discharge of mucus from the vagina, resembling the white of an egg; and there is, also, some discharge of blood, but it is not profuse in the first stage. This discharge is more or less profuse, according to the exercise the woman takes, or the kind of food in which she has indulged.

She feels sharp, lancinating pains shoot through the neck of the womb more or less frequently; her stomach is liable to be disordered, and acid eructations to be thrown up. The bowels are more or less deranged, being sometimes costive and sometimes too free. Her feet are liable to swell, and she feels a sense of weight in the back and uterus, accompanied with a bearing down sensation, which increases in proportion to the increase of the size of the tumor.

The general system differs more or less from the disease which is preying upon it, and, as the disease progresses, all these symptoms are aggravated. The pains increase, and the bleeding becomes more and more profuse; the general system is failing every day, and the patient becomes lean and pale; she sleeps but little, and her mind becomes apprehensive of serious danger from her situation. If the uterus be again examined with the speculum, the little sore seen on the first examination will be found to be enlarged. Its surface is irregular, and its edges uneven, and it looks as if it had been nibbled out by a small animal with fine teeth. When touched, it bleeds easily.

This ulceration may progress more or less rapidly, till it has

destroyed all the neck of the womb; and it sometimes, according to authors on this subject, destroys a portion of the body of the womb before the patient dies. It is to be distinguished from the corroding ulcer of the uterus by the appearance presented by the surface, which, in the cancer, seems as though it had been nibbled out; while the corroding ulcer looks as though it had been destroyed by strong lye, or something that had softened the parts and dissolved them, with soft edges and stringy fibres attached to them. The patient is not unfrequently much exhausted by large flows of blood.

These are the general symptoms, filled up, however, with a thousand minor ones, which grow out of the disease, and the manners, exercise, and habits of the patient.

Since the first edition of this work was written, the author has seen a case of cancer of the uterus, with these additional symptoms: There was constantly discharging more or less of a slightly wheyish-looking fluid from within the cavity of the uterus, that scalded the parts like hot lye. This fluid came away more profusely at some times than at others, and when a half ounce was discharged, the burning pain was so severe that the patient would cry aloud. The odor was very offensive. There would settle in the vagina hard, grayish, granular lumps, like rough, irregular crystals of potash; and, upon applying the test of lytmus paper, and the nitric acid, it was ascertained to be the urate of ammonia; indeed, the ammoniacal smell of the fluid was very evident. This fluid, when tested by heat, showed a large amount of albumen. The urine also contained a very large amount of albumen. The urate of ammonia would collect in the vagina in twenty-four hours to the amount of a drachm and a half, in lumps from the size of a millet-seed to that of a large bean. I never saw or read of such an appearance in this disease before.

**TREATMENT.**—A patient laboring under cancer of the uterus has always more or less fever; the pulse is wiry and frequent, owing to the irritation produced by the disease. The patient, therefore, should be bled frequently, and but little blood taken at a time. This may be taken from the arm by the lancet, or from the inside of the thighs by leeches. The blood will be found in all cases to be sizy, showing the local inflammation under which the system labors.

It is the opinion of Dr. Dewees, that it is better to apply leeches to the vulva than to the thighs, back, or abdomen. Dr.

Gilbert and Dr. Duparcque say, "they are of infinitely more service when applied to the neck of the womb than when applied anywhere else. But it is to be lamented, that, through a species of false delicacy, many females will suffer death before they will submit to this remedy; although it is not more indelicate, when properly attended to, than many other things which are done with impunity. In this case, life is often suspended upon the use of this remedy, putting out of the question the progress of a disease more loathsome in its character and certain in its consequences than almost any other to which the human family is liable." It is to be hoped that the day will come when it will not be thought indelicate to do anything in a proper manner that will save life. Let it not be forgotten, then, that bleeding is essential, and that too from the parts, or as near to them as possible, for the cure of cancer of the uterus.

The bowels must be kept open every day, and there is a very great choice in the medicines which should be used for this purpose. The best medicines are:

*Recipe:* Epsom Salts, one ounce.  
Magnesia, half ounce.

Mix them together, and take a tea spoonful two or three times a day, dissolved in water; or,

*Recipe:* Cream Tartar, one ounce.  
Milk of Sulphur, one ounce.

Mix, and take them as above directed; or,

*Recipe:* Seidlitz Powders.

Of which, one or two may be taken daily, while effervescing. Castor-oil may be occasionally given; or,

*Recipe:* Aloes Socotrine, thirty grains.  
Pulv. Rhubarb, one drachm.  
Castile Soap, eight grains.  
Ol. Cloves, forty drops.

Form thirty pills, and give one, two, or three at bedtime, so as to procure one or two operations the next day. The patient should not be purged at any time so as to reduce her strength.

Great care should be taken to observe cleanliness, as the discharge in this disease is all the time increasing, and the frequent hemorrhages that take place from the corroded blood-vessels, lodging in the vagina, create a smell that is insupportable by the friends, and sometimes by the patient herself. This should be removed frequently, by using a wash, with a womb syringe. The wash should always be mild, such as balm tea, slippery



elm, green tea, or milk and water, or chloride of soda in water, or a weak dilution of pyroligneous acid; all of which, when used, should be a little warm. Lumps of well burnt lime, pounded and put into small bags, may be placed under the bed-clothes; and small vessels filled with lime may be set in different parts of the room, to absorb the bad air. But, as soon as the lime is slacked, it should be removed, and fresh lime put in its place.

A cloth may be wet with the chloride of soda, and be kept all the time to the vulva; and the room should be kept well ventilated, according to the season of the year.

Rest is an important item in the management of this disease.

We do not mean by the term rest that the patient should lie down all the time, but that she should not, on any occasion, be fatigued. She may walk slowly over the floor, recline on a sofa, or lie on a bed, as she may choose. She should not, however, lie much on feathers. A shock mattress is preferable.

Without proper dieting, medicine will avail but little in the cure of cancer of the uterus. The patient should use no animal food, fish, flesh, or fowl, and no broths or soups. Her diet should be entirely vegetable, composed of such articles as gruel, rice, mush and milk, mush and molasses, rye mush made of unbolted flour, boiled turnips, boiled greens or salad, Irish potatoes cooked properly, a soft egg, or any mild vegetable that agrees with the stomach.

The quantity of diet taken is of as much importance as the quality, and but little should be taken at a time.

We have treated of the *cleansing* washes to be used in this disease, and we now come to treat of the *medical* washes. As the disease progresses, the discharges of blood will be increased; and, if they should threaten to weaken the patient from their profusion, they must be checked. But, if there is much pain, and the bleeding is not profuse, it should be checked very gradually.

For this purpose, an ooze made of black oak bark, with a lump of alum as large as a hazel-nut dissolved in a pint of it, should be used as an injection, with a womb syringe. This, when properly applied, will check the bleeding. But if the bleeding be profuse, and the patient is faint, the sulphate of zinc—two drachms to the pint of ooze—should be used. The zinc will sometimes answer the purpose, if dissolved in clear water,

rain water should be chosen. When these fail, you may use the following :

*Recipe* : Nitrate Silver, half drachm.  
Rain or River Water, one pint.

Dissolve the medicine in the water, and use it with the syringe ; or,

*Recipe* : Sulphate Copper, one drachm.  
Rain or River Water, one pint.

Dissolve, and use as above.

These washes may be repeated every hour, or two, till the bleeding is stopped.

The painful nature of this disease demands of us some palliatives. We, therefore, must use anodynes ; and we should begin with the weakest first. Let paregoric be first used ; of which, as much as the symptoms require may be given, till the pains are relieved. When this fails to procure ease in a reasonable time, by giving a reasonable quantity, two or three syringefuls each time, we must then resort to laudanum, and use that till it fails, when opium must be given in a solid form ; and should this become too feeble to give relief, we must resort to the more concentrated form of the black drop.

Any of these articles may be given in the way the patient can take them best. If the stomach or head be affected with any of these anodynes, they may be taken in strong coffee, or a little weak brandy toddy.

#### DEFORMITIES OF THE PELVIS.

Deformities of the pelvis may proceed from various causes. *First*, from rickets ; *second*, fractures of the bones of the pelvis ; and *third*, disease of the bones, such as white swellings.

Let the deformity proceed from what cause it may, if the disability takes place before marriage, the girl should not marry ; for if she does, she can promise herself nothing but a repetition of disappointments in child-bearing. In all probability, she can never survive the birth of a child ; and, if she does, it will only be to experience all the tortures of death in giving birth to a dead child. She therefore should be advised by the mother never to marry.

Fortunately for the ladies of the United States, not one in twenty thousand is the subject of rickets, and but few suffer the misfortune of fractured pelvic bones. But should any be sufferers from any of the above causes, they should not marry.

## OF THE BITES OF SERPENTS.

Children are very liable to be stung by poisonous serpents, and if timely aid is not afforded, they die. It would be impossible, in many cases, to obtain a physician; and we shall, therefore, endeavor to give such directions as may enable the parents to afford immediately the requisite relief; for persons stung by some serpents die in twenty or thirty minutes, if relief is not obtained.

When a child is stung by a poisonous serpent, the danger depends in some measure on the part bitten. If the bite should be near the ankle, or on the foot, where the veins are numerous, and lie near the skin, if a tooth of the serpent should enter a vein, the poison will be thrown immediately into the circulation; and in that case, the danger will be great.

The first dangerous symptom that occurs is a tightness in the throat, prostration of strength, and vomiting, succeeded by coldness of the extremities—extending over the whole surface—faintness, and total loss of pulse; which symptoms, if not speedily removed, will terminate in death.

The part bitten may or may not swell. If it swell, the danger is not so great; and if it does not swell, it is an evidence that the poison has passed into the circulation. The throat will then swell, and the tongue become stiff; and when this is the case, the condition of the patient is eminently critical.

In all newly-settled countries, where serpents are numerous, almost every family has a popular remedy for a snake-bite. We recollect, when a boy to have seen a man stung on the ankle-bone by a copperhead. He was about eighty rods from the house, and he immediately dropped his scythe and walked briskly to the house. The family knew not what to do for him, but had heard that fresh earth would extract the poison of a serpent. Immediately there was a hole dug in the earth, and his foot and leg placed in it to his knee, and the earth returned into the hole. The man soon became very sick, and was likely to faint. Nothing else being at hand, a draught of the spirits of camphor was immediately given him, when he revived a little, but soon became faint again, and the draught of camphor was repeated. He then vomited freely, and threw up green fluid; but the camphor was given again and again, till he drank more than a pint. He became better; the pain in his foot, of which he had complained so greatly, together with the sensation of suffocation, subsided, and

he was removed into the house. Warm toddy was administered to him several times during the night; the next morning he walked two miles home; and in a few days he returned and completed his work. No special good at that time was attributed to the use of the spirits of camphor and warm toddy, except that they served to revive the man. But we have long since been satisfied that the stimulus of these articles saved his life.

The following cases sustain this opinion; they were related by William Mayrant, Esq., formerly a member of Congress, and were communicated by Professor Parsons, and published in the *Medical Recorder*, 1823, vol. 6, page 619. We give them in the words of Mr. Mayrant:

"In September, three years ago, one evening, at my residence on the hills of Santee, I heard a violent scream from a female at no great distance; in about from seven to ten minutes, I was called out, and informed that Essex, a male slave, was bitten by a rattle-snake, and was dead, or dying. They had brought him to the house; and, on going out, I found him extended, motionless and speechless, his jaws locked, with a very feeble, fluttering, and scarcely perceptible pulse. Humanity, as well as interest, directed me to every exertion to relieve him. I had heard of the successful use of spirits, both among the whites and Indians, in this affection. Calculating, from the rapid effects of the poison upon the system, that it must act on the nerves, and having seen a child about eight or nine years of age take, in typhus, near a bottle of wine in a short time, with benefit, I determined to try the effect of the strongest stimulus I could command. I therefore mixed nearly a tea spoonful of red pepper, finely powdered, in a glass of whiskey, had his jaws opened, and poured it down his throat. In a very short time it was ejected, as were three or four others, in succession. I still persevered, finding the pulse a little revived. After the fourth glass, it remained on the stomach; the pulse shortly after improved; and, after getting five or six glasses to remain, I ceased giving any more, until the pulse fell very fast—nay, almost ceased beating. I then commenced again pouring down the spirits and pepper, till it revived. Apprehensive that the quantity of stimulus would destroy him, I soon discovered that, on increasing the stimulus, the pulse would increase. After taking more than a quart, he spoke in his native tongue to his countrymen; a copious stool soon followed; the pulse still fluctuated. The spirits were again administered till the pulse became steady, the dose and frequency

of the article being regulated by its effects. In about two hours, the pulse was so strong that we left him in the care of his attendants, with strict injunctions to renew the stimulants whenever they found it necessary. In the morning the patient was pretty well recovered, but in a state of considerable debility. I continued through the day giving hartshorn in moderate doses; also spirits and water, with nourishing food. There were, during the course of the night, three quarts of spirits used, one quart of which may have been wasted in pouring it down his throat.

On examining the wounds, when first brought to me, I found the two marks of the teeth from an inch to an inch and a half apart, which shows that the snake must have been of uncommon size. I observed no swelling about the part bitten. The parts under the jaws and about the throat were, however, so much tumefied that I was apprehensive that the passage to the stomach would be closed. I applied to the wound and swelling under the throat a poultice of slacked lime and soap, under the idea that the poison was an acid, and that the alkali might attract and neutralize it. Most of the flesh under the jaw where the swelling was mortified fell out, and around the wound larger than a dollar sloughed away. They, however, in a short time, healed, by poultices and a decoction of red oak bark. The person that was bitten said, that as soon as he felt the wound, he took a rail from the fence near him to kill the snake, which was a very large one; his strength, however, failed; he could not use the rail, nor make any exertion whatever. Being asked why he did not call for assistance, he said that he felt that his tongue, and all around his throat, was so tied up that he could not speak. He was found in a few minutes by the overseer of the plantation, leaning on the fence and puking violently. In the morning, he had no recollection of being brought to the house, or what we had been doing for him."

*Case 2d.* "The year after, I was called, late in the night, to relieve a negro that had been bitten by a rattle-snake. He was in great pain about the breast, and puking a green fluid. Spirits and green pepper were given him, in prepared doses of a wine glassful, until the pulse returned. The pains abated after the man had taken six glasses of spirits and pepper; he was much better, the puking ceased, and the pains abated; he recovered by the use of a quart in ten or twelve hours."

In the early settling of Kentucky, there was a popular remedy brought by Michael Shaw into the neighborhood where we were



raised. The remedy is simply to chew the herb called *ladies bleeding heart*; apply it freely to the bite, and also swallow the juice of the herb till vomiting is induced; when the draught must be repeated, till all the sickness at the stomach and unpleasant feelings are removed from the system. The leaves of the herb may be chewed, and the juice swallowed; or they may be bruised, a little water added, and the juice squeezed out and swallowed. A pint of the juice was allowed to be a certain cure, while a large poultice of the fresh bruised or chewed leaves was applied to the bite. Mr. Shaw was bitten by a rattle-snake, and also by a copperhead, the next year, and was cured by this remedy alone. Nor did he lose three hours' time from the effects of the bites. He said this remedy was so effectual with the tribe of Indians by whom he was taken prisoner, that they had no dread of the bite of the most poisonous snake.

The herb grows in rich ground, from one to two feet high, and has a rough leaf, lanceolate, single on the stalk; the taste of the leaf is pungent, and a little austere; the stalk is jointed, not unlike the smartweed, or the hydra peppers; the flowering stem is also like the smartweed, except that it is larger. If the herb grows in the sun, the flowers are of a reddish hue; but entirely in the shade, they are rather of a dirty ash color.

If the right plant be obtained, the remedy may be depended upon; but, as the stimulating remedy, with spirits, red pepper, opium, and ammonia, or hartshorn, can more certainly be obtained, it should always be used freely.

#### THE STINGS OF INSECTS.

These may be treated upon the same principles as the sting of serpents. The sting of bees, wasps, spiders, &c., may be successfully treated by the immediate application of hartshorn, spirits of turpentine, or alcohol, which should be freely applied to the part affected; and, if any unpleasant symptoms supervene, as vertigo, sickness at the stomach, faintness, coolness of the surface, loss of pulse, &c., the stimulants should be given internally. The juice of the above herb will relieve the pain from the sting of a bee or hornet in a few minutes. We have been relieved a great number of times by chewing and applying the leaves to the part stung.

In all cases, when the person has been stung by a serpent, and sickness follows, as soon as the violence of the symptoms is relieved, the bowels should be freely evacuated by castor-oil, or some other quick and gentle purgative.

We would here remark, that the leaves of the ash-tree have been used very successfully in our own and other countries, as a remedy for the bite of poisonous serpents.

The juice is taken freely internally, and the bruised leaves applied to the bite. Numerous other remedies are in popular use, but those directed above are well authenticated by experience, and we think them sufficient. We give none on conjecture.

#### HYDROPHOBIA, OR CANINE MADNESS.

Hydrophobia is defined to be the dread of water; but this symptom alone will not distinguish this disease from many others in which a dread of water also exists. In the disease called hydrophobia, the dread of water is only one symptom with many others, belonging to a specific disease, produced by a specific poison.

It has been a matter of much research and diligent inquiry, whether this poison can be communicated by any animal except the dog; and it is now settled that it may be by any of the canine or feline tribe; that is, any of the species of the dog or cat kind. And it has also been proved that the saliva of a man laboring under this disease, when introduced into the dog, will communicate the disease, and the dog be thereby rendered capable of communicating it to other dogs.—See 6th vol. *Medical Recorder* for 1823.

This disease is of great antiquity. In the days of Homer it was well known, and by him was called *Lyssia*. He refers to it several times in the *Iliad*, where he “is continually making his Grecian heroes compare Hector to a mad dog, which is the term used by Teucer; while Ulysses, speaking of him to Achilles says, ‘So with a furious *Lyssia* was he stung.’”

The symptoms of *rabies canina* are these: spasmodic contractions of the muscles of the chest, supervening to the bite of a rabid animal, preceded by a return of pain and inflammation in the bitten part; great restlessness, horror, and hurry of mind—(Goode)—and we might add, a peculiar wildness in the expression of the eye, and a fearful and ferocious expression of all the features, together with an attitude of the body which cannot be mistaken by those who have once seen it.

It appears, from the best authorities on this subject, that it matters not whether the bite be deep or shallow; if the disease be communicated by it, the characteristic symptoms will accompany it.

Hydrophobia is not, however, produced only by the bite of an animal. It is recorded by Goode, as taken from various authors, that the bite of an enraged man has produced hydrophobia, which terminated in death, without the dread of water.

Le Cat gives a case of death produced by an enraged duck, and in a German miscellany of repute we have another of the same kind. The bite of a goose, and also of a hen, has produced the same result, though neither of them was rabid.—*Goode* Marvellous as these things may appear, it is more reasonable to accredit them than to impugn the host of authorities to which they appeal, as *Theirmayer, Le Cat, Camerarius, &c.—Goode.*

That the specific poison of rabies is less active than many other kinds of morbid poison is clear, from the fact that it is never found diffused in the atmosphere so as produce an epidemic, and that it never operates on those who are the most susceptible of its influence, except when accompanied with a wound, or inserted under the cuticle; and then it is slow in taking effect.

It rarely happens that all the men or quadrupeds bitten by a mad dog are affected by hydrophobia. Mr. Hunter gives an instance, in which only one in twenty persons bitten was afflicted with it. This virus is perhaps less volatile than any other; it is also, perhaps, less indecomposable; and hence, it is capable of remaining in a dormant state, in any part of the system into which it has been received, for a far longer period than any other known contagion whatever.

It has been doubted whether the virus is capable of being propagated from the human subject to any animal, even by inoculation; but a bold experiment of M. Magendie and M. Breschet has completely settled this question. On the 19th of June, 1813, “having collected on a fine piece of linen a portion of the saliva of a rabid man in the last stage of the disease, they inserted it under the skin of two dogs that were in waiting, both of them in good health; of which, one became rabid on the 27th of July, and bit two others, one of which also fell a victim to this disease just a month afterwards.”

No one who has smelt the odor thrown out from the body and saliva of a mad dog can ever mistake it: it is so offensive, and so peculiar, that we once detected it at the distance of several rods, before we came up with the dog, which was lying still in a corner of a fence. Dr. Wolf states that the “blood of one of his patients stunk intolerably as it was drawn from a vein.” Dr. Vaughan's patient complained “of a most offensive smell which

issued from the original wound, but of which no one was sensible but himself."

We might go on to enumerate many facts, as related by authors on this subject; but they would be more curious than profitable. The length of time that the virus requires to become active, after having been introduced into the system, varies. Dr. Hamilton, volume 1, page 112, after a very laborious search, fixes the tenth day as the earliest period at which the disease has appeared, and nineteen months as the latest; and, between these periods, the time of attack varied very much. They were as follows:

Of 131 cases — 17 were seized before the 30th day.

|    |         |           |                      |
|----|---------|-----------|----------------------|
| 63 | between | 30 and 59 | } days<br>inclusive. |
| 23 | from    | 60 to 90  |                      |
| 9  | "       | 90 to 120 |                      |
| 2  | at      | 5 months. |                      |
| 1  | "       | 5 "       | & 11 days.           |
| 1  | "       | 6 "       |                      |
| 1  | "       | 7 "       |                      |
| 2  | "       | 8 "       |                      |
| 1  | between | 8 & 9 "   |                      |
| 2  | at      | 9 "       |                      |
| 1  | "       | 11 "      |                      |
| 1  | "       | 14 "      |                      |
| 2  | "       | 18 "      |                      |
| 1  | "       | 19 "      |                      |

*Dr. Mease* has published a case, in which hydrophobia in a boy occurred three years and four months after the bite. It appears, from a labored collection of facts by Dr. Hamilton, that it matters not where the bite is received as to the early or late development of the disease.

Of the remote or predisposing cause of this disease we know nothing; for all the theories of dogs being exposed to over heat or cold, or living on putrid flesh, suffering from starvation, or being long kept from water, have been proved, by actual experiment, and attested cases by men of undoubted veracity, to be false. We, therefore, are kept in the dark as to the remote or exciting cause of the disease. But of one thing we are certain, that is, it is a disease of its own kind, and possesses its own specific effects.

The symptoms of attack are these: Before the poison becomes active in the system, the part which has been bitten becomes of a



reddish or purple hue; sometimes the scar opens a little, and a fetid serum oozes out. Although the part swells and becomes painful at times, yet more frequently it does not swell. The development of the disease begins with "a painful constrictive sensation in the chest; the respiration is interrupted with frequent sighings; the spasmodic symptoms increase; and, at length, the whole system, and especially the lungs, become affected with violent convulsions; the breathing is very laborious; the paroxysms continue about two minutes; there is frequent sickness and vomiting. The convulsive spasms about the throat oblige the patients to gulp what they swallow, and they are apt to show a reluctance to a glass of water. The skin is apt to be cool, and the tongue moist, and the bowels open; the thirst urgent, without any tendency to delirium. The patient, however, becomes worn out by sensorial exhaustion and distress, and sinks into a stupor not unlike that in typhus fever, and dies."

This is a description of the mildest form of the disease, and such as we have met in practice; but we will now give the description of this disease as related by Dr. Goode, in the third volume of his *Study of Medicine*, page 238:—"Whatever be the exciting cause, the wounded part almost always takes the lead in the train of symptoms, and becomes uneasy, the cicatrix looking red and livid, often opening afresh, and oozing forth a little colored serum, while the limb feels stiff and numb. The patient is next oppressed with anxiety and depression, and sometimes sinks into a *mélancholy* from which nothing can arouse him. The pulse and general temperature of the skin do not, at the same time, vary much from their natural state. A stiffness and painful constriction are, however, felt about the chest and throat; the breathing becomes difficult, and is interrupted by sobs and deep sighs, as the sleep is—if any be obtained—by starts and frightful dreams. Bright colors, a strong light, acute sounds, particularly the sound of water poured from basin to basin, and even a simple agitation of the air moved by the bed-curtains, are sources of great disturbance, and will often bring on a paroxysm of general convulsions, or aggravate the tetanic constriction. The patient is tormented with thirst, but dares not drink, the sight, or even the idea of liquids, making him shudder. His eye is haggard, fixed, and tinged with blood, from the violence of the struggle; his mouth filled with a tenacious saliva, in which, we have already shown, lurks the secreted and poisonous miasm, and he is perpetually endeavoring to hawk it



up and spit it away from him in every direction; often desiring those around to stand aside, as if conscious that he might thereby injure them. The sound he makes, in endeavoring to extricate this phlegm from the throat and mouth, is often of a singular kind, and has, occasionally, to a fruitful imagination, seemed to be a kind of barking or yelping. Hence the vulgar idea that barking like a dog is a common symptom of the disease. The restlessness is extreme; and, if the patient attempt to lie down and compose himself, he instantly starts up again, and looks wildly around him, in unutterable anguish."

"On going into the room," says Dr. Munckley, describing the case of a patient to whom he had been called, "we found him sitting up in his bed, and one attendant on each side of him; he was in violent agitation of body, moving himself about with great vehemence, as he sat in the bed, and tossing his arms from side to side. On seeing us, he bared one of his arms, and, striking it with all his force, he cried out to us, with the greatest eagerness, to order him to be let blood. His eyes were redder than the day before, and there was added to the whole look an appearance of horror and despair greatly beyond what I had ever seen, either in madness or any other kind of delirium." The patient was, "nevertheless, perfectly in his senses at this time, and there was not the least danger of his biting any person near him; nor, among the variety of motions which he made, was there any which looked like attempting to snap or bite at anything within his reach; and they who were about him had no apprehension of his doing this." — *Medical Transactions Vol. 2nd, Art. 5, p. 53.* The patient had, at this time, reached the third day of the disease, and expired about two hours after Dr. Munckley had left him.

We have now given the mildest and most aggravated forms of the disease. All grades of symptoms may be found between the two just given.

In some cases, the patient can drink water all the time; while in others, he cannot take water scarcely at any time.

TREATMENT. — Our curative practice is unfortunately all afloat in this dreadful disease, and we have neither helm to steer by nor compass to direct our course. There is, indeed, no disease for which so many remedies have been devised, and none in which the mortifying character of "vanity of vanities" has been so strikingly written on them all. In the loose and heterogeneous manner in which they have descended to us, they seem,

indeed, to have followed upon one another without rational aim or intention of any kind.

In examining them, however, closely, we shall find four principles by which physicians appear to have been guided in their respective attentions to this disease.

*First.* That of supporting the vital power by stimulants, so as to enable it to obtain a triumph in the severe conflict to which it is exposed.

*Second.* That of suddenly exhausting the system by severe bleeding and purgatives, as believing the disease to be of a highly inflammatory character.

*Third.* That of opposing the poison by the usual antidotes and specifics to which other animal poisons are supposed to yield; and

*Fourth.* That of regarding the disease as a nervous or spasmodic, instead of an inflammatory affection; and, consequently, as most successfully to be attacked by an anti-spasmodic course of medicines and regimen.

There was a class who endeavored to prevent the poison from entering the system by removing the part bitten. This was done either by burning the part out with a red hot iron or by caustic alkali, or by removing it by means of the knife. The advocates for these modes of practice were Dioscorides, Van Helmont, Morgagni, and Stahl; all of whom were for removing all the bitten part by a red hot iron. Schenck, Ponteau, and Mosby, used the caustic alkali. Hildanus advised excision first, then the application of the cautery, and after this, the removal with the knife of the parts killed by the cautery.

Others recommend stimulating remedies—such as cantharides, camphor, turpentine, &c.—to be applied to the wound made by the knife; and Celsus recommended table salt to be applied to the wound after the use of the knife, so as to keep up a free discharge. Sir Kenelm Digby and Haygarth advise the wound to be washed with warm water or wine before excision is commenced.

Haquet, Percival, Vater, and Wedel, recommend *first*, a ligature to be tied tightly immediately above the bite, and then, as soon as possible, to excise the wound.

*Second.* To give the volatile alkali, camphor, cordials, pepper, oil of cajeput, the different preparations of tin, copper, iron, and, in later periods, the Peruvian bark. Celsus recommended submersion in cold water, as that the patient be thrown into “a fish

pond;" and this he would do repeatedly, till he drank himself full of water, or, in other words, was nearly drowned; when he should be taken out and submersed "in warm oil, to prevent spasms." Some persevered in this practice, omitting the oil, till the patient was apparently dead; and one case is recorded of a recovery after this practice. To forward this view of the case in the treatment of the disease, bleeding was carried to great length; even to the loss of six or eight pounds of blood, in a short time; and many were the advocates of this practice. But the remedy has been successful only in a few cases; and it has been doubted whether they were cases of genuine lyssia or hydrophobia.

Those of the medical world who have been opposed to the depleting plan of treatment have adopted its opposite, and stimulated their patients, with a hope of counteracting the lyssiatic virus. For this purpose, the strongest stimulants were used; reasoning from analogy, that strong stimulants cured the bite of the "cobra di capello, and the rattle-snake." Among these remedies, we find the *ophiorrhiza mungos* of Linnæus, which remedy is used to this day in India and Ceylon, as an antidote against the bite of a mad dog. "Kempfor highly extols it, and Gremmius, who practised with great reputation at Columbo, employed it very largely."

Acids and alkalies belong to the same class of anti-lyssiatics. Agricola preferred the muriatic acid, which he regarded as a specific, even when restrained to a topical application. *Poppius* preferred the sulphuric acid; but by far the greater number of practitioners preferred the acetous acid. Many combined this last with butter, and used it externally and internally. Wodel, for the cure of the bite of a mad dog, directs the patient "to drink vinegar, theriac, and rue."

The greater number of practitioners, however, preferred the alkalies, and especially ammonia and the volatile alkalies. On the continent, and especially in France, the usual form in which ammonia was used, in cases of lyssia, was that of a strong caustic spirit; "prepared with quick lime, combined with rectified oil of amber, rendered more easily missible by being rubbed in half its weight of soap." They employed this externally and internally. In the French Journal of Medicine, we have several reports of its successful use, when given only internally. One case related by M. Hervet, and another by Rubiere.

It was thought, at one time, that mercury,—from its specific

effect upon the lymphatic system, which is certainly the outlet of the poison of rabies,—would prove a specific in this disease; and although it has gained the reputation of curing many persons who have been bitten by the mad dog, especially after the immediate excision of the bite, yet it also, in many cases, has failed to perform a cure. *Desault*, of France, and *James*, of England, were strong advocates both of the external and internal use of mercury. They used it as a preventive of the disease, and as a remedy for it after it appeared. The turbeth mineral, in the shape of pills, was the favorite form in which they used the medicine. Dr. James cured a number of hounds belonging to Mr. Floyers, after every other favorite and fashionable remedy had been tried in vain. All the hounds that were salivated with mercury recovered, while those treated otherwise all died.—(*See Philosophical Transactions*, &c.) But “his experiments on mankind are less complete;” for, only three have been reported as cured, and the medicine was given to them as soon as they were bitten; and these persons might not have gone mad, if the mercury had not been used. The patient must be salivated, and kept under the influence of the mercury, till all possible danger is past, in order to ensure a cure. But *Desault* and *James* have been strongly opposed by *Frank*, *Girtanner*, *De Moneta*, *Raymond*, *Morse*, and a host of others, who declare they have no confidence in mercury.

The efficacy of mercury in lyssia is, however, still strongly relied on by many; and to my own knowledge, it proved a preventive in one case,—that of Mr. Jonathan Jones, of Henry County, Ky.

Cantharides have held a high reputation in the cure of hydrophobia. “*Bohadsch* tells us gravely that the disease will always yield to ten cantharides, powdered and introduced into the stomach.” *Monconys* says, that “the powder should be continued from the bite to the time in which we may reasonably expect the symptoms of hydrophobia;” and adds, that “this medicine, which was regarded as an arcanum in his day, was a remedy of publicity over all Greece.” He might have extended his theatre; for Egypt was as well acquainted with the general principles of this practice as Greece or Hungary. *Avicenna* positively states, that, whatever diuretic was employed, it should be carried to its utmost acrimony, “even to the discharge of bloody urine.”

With the same view, the ash-colored liverwort has been exten-



sively used in England, and has superseded the cantharides. It was given in powder, with an equal quantity of black pepper, "a drachm and a half of the two forming a dose for an adult, which was taken for four mornings, fasting, in half a pint of warm cows' milk." The patient, however, was first to lose nine or ten ounces of blood, and afterwards to be dipped in cold water every morning for a month. This remedy was highly extolled in the Philosophical Transactions, when M. Dampier introduced it to public notice, at an early period of the history of the Royal Society; while, at the earnest solicitation of Dr. Mead, the powder was admitted, in the year 1721, into the London Pharmacopœia, under the title of *pulvis antilyssus*. Dr. Mead declares, "that when used with the previous venesection and subsequent cold bathing, he had never known it fail of a cure, though he had used it a thousand times in the course of thirty years' practice." — *Goode*, vol. iii., 249. In these days, however, we doubt such extravagant success in the treatment of so formidable a disease.

Musk and opium have been highly extolled and extensively used, by a great number of physicians, both in Europe and America. Dr. Cullen gives us nothing definite on this disease. Opium and musk, however, have failed, in common with all other remedies, for the cure of hydrophobia. Musk was at one time combined with cinnabar in large doses, and for a time obtained some celebrity, but finally was laid aside as ineffectual.

The prussic acid has also been resorted to, but without effect. It has been injected into the veins of dogs, and of men, in a diluted state, but without producing any good effect.

The celebrated Ormskirk medicine, as given by Dr. Goode, is as follows :

*Recipe* : Powder of Chalk, half ounce.  
 Armenian Bole, three drachms.  
 Alum Pulv., ten grains.  
 Pulv. Elecampane Root, one drachm.  
 Ol. Anise-Seed, six drops.

Mix all well together, and give it at a dose every morning for six mornings, in water, with a small proportion of fresh milk. It is said that this remedy has but seldom failed to perform a cure.

It is also said that the *plantago*—madwort plantain—has for some ages been a popular remedy for the bite of a mad dog, in the north of Europe; and, "in a late communication to Sir Walter Farquhar, in the Russian tongue, translated and pub-



lished in Mr. Brande's Journal of the Sciences and Arts, we are told, that it still retains its popular sway and reputation over a great part of the Russian empire, and that in the government of Isola, it has never failed of effecting a cure in a single instance for the last five-and-twenty years." The preparation is simple; the root is reduced to a powder, and the powder is to be eaten by being spread over bread and butter. "Two or three doses are said to be sufficient in the worst cases, and will be found to cure mad dogs themselves."

Dr. Goode says, "In the second number of the *Hamburgh Medical Repository*, *Dr. W. Rithmeister*, of Powlowsk, in Finland, has given an article, in which he has collected a multiplicity of striking cases, and various authorities, in proof that the blood of a rabid animal is a specific against the canine hydrophobia, even where the symptoms are most strongly marked. The mad dog, or other quadruped, is for this purpose killed, and its blood drawn off, and collected as an antidote against hydrophobia. Dr. Stockman, of White Russia, confirms this account, and states the practice to be equally common and successful in his own country."

Chlorine has been used extensively by Professor Brugnatilli, of Pavia, with, as he declares, great success; but Professor Valetta, of Milan, denies that it possesses any curative powers in this disease.

In conclusion, we would mention, that the chick-weed of our own country, and the hooded willow, have had some reputation in the cure of the bite of the mad dog. A pint of vinegar, drunk every day for a week or two, is also said to be a remedy, and there are some declarations of its utility. It is said to have cured the hydrophobia.

From all that has been said and written on this subject,—for an abundance more than we have here related has been said and done, and many have been the advocates of the various remedies,—we may safely say we have no specific for the bite of a mad dog, though it is clear that the medical world has not been idle in the pursuit of one.

We would say, however, as our deliberate opinion, from all we have seen of the disease, and all we have read about it, that the safest plan would be, to wash the wound immediately; after which, cut it clear out, leaving no trace of the bite behind; then fill it up, or cover it over, with red precipitate, and dress it with a strong stimulating plaster. Bleed the patient moderately, and

salivate him as soon as it can be done; let him be kept on a light diet, his mind and body tranquil, and let the ptyalism be kept up moderately for one month, watching the under part of the tongue every day, and as soon as the small whitish points are discovered, cut them open with a sharp lancet, and burn them with a red hot knitting needle. Be very particular to open them all.

If the disease should break out, the patient should be stimulated moderately, made to drink vinegar freely, and kept as tranquil as possible. This course of treatment, we believe,—from all that we have read and seen on this subject,—to be the best that can be adopted.

## DR. ANGELL'S TREATMENT OF FEVER.

THE following treatment of fever, from my friend, Doctor Angell, was received too late to be inserted in the proper place,—on the treatment of fevers,—owing partly to his numerous engagements, and partly to absence from the city; but the receipt of which is now hereby acknowledged by his friend,

J. W. BRIGHT.

DR. BRIGHT:

Dear Sir,—The treatment of fever subjoined is substantially that which I have pursued from the commencement of my practice, at Cleveland, in 1826, modified, in 1831, by the exclusion of calomel and the addition of digitalis; and it has been tested on the shores of Lake Erie, the swamps of Louisiana, and the hills bordering the river in Mississippi. Of its success I will merely state, that but few cases of summer or autumnal fever required my attention more than three days,—generally no paroxysm, or but one, recurring after the commencement of the treatment, and not more than one in two hundred, of all my cases of fever, terminating fatally.

In bilious fever, emetics or purgatives are generally given before the attendance of the physician; if not, I usually premised a mild purgative; occasionally substituting an emetic of ipecac., where the yellow, furred tongue, bitter taste, nausea, and headache, indicated its use. My usual purgatives were castor-oil, senna, rhubarb, extract of white walnut, or Seidlitz powders. I have cured many cases where no purgatives were used, and view their repetition as generally retarding the cure and increasing the subsequent debility.

During the febrile paroxysm, I gave the following mixture.

*Recipe:* Tincture of Digitalis, one drachm.  
Sweet Spirits of Nitre, four drachms.  
Paregoric, three drachms.  
Tartar Emetic, one grain.

Lessening or omitting the tartar, if it cause nausea or vomiting.

Mix. One drachm, or a medium sized tea spoonful, to be given, in water, every two hours, to an adult; eight or ten drops to a child six months old; and in proportion for intermediate

ages. I also direct cold water to be drank freely, and the skin to be freely and frequently washed with it, so long as its impression is pleasant, and the surface remains heated. Immediately on the remission of the fever, I commence the use of quinine, two grains every two hours, discontinuing the febrifuge mixture when the fever has entirely intermitted, but continuing the quinine through the intervals, and subsequent paroxysms, if any occur; resuming, during the fever, the use of the mixture and cold water as before. The quinine must be used till the fever fails to rise at its usual period, as above directed; it may then be given for twenty-four hours longer, at intervals of four hours. The quinine, when given with the fever mixture, will ameliorate and shorten the fever paroxysm, and, in most cases, prevent its recurrence. If fearful of using it in the fever, it will suffice to give it during the interval.

Where quinine affects the head, the precipitated extract of bark, in three or four grain doses, may be substituted, unless the stomach be irritable, when it will frequently be rejected. The extract, in rather larger doses, is equally efficient with the quinine; and either it or quinine may be conjoined with the oil of black pepper — one drop to the dose.

If the headache be severe, especially if attended with great heat or throbbing in the temples, the application of cold water to the head, by washing, pouring, or wet cloths, is beneficial.

If nausea, vomiting, or pain in the stomach be present, a fomentation of hops or a mustard plaster may be used, and warm instead of cold water drank, and if insufficient, especially when there is great thirst, or a red tongue, cupping or leeching over the pit of the stomach.

In nervous irritability of the stomach, the tongue not much furred nor red, but drinks and medicines inducing immediate vomiting, the matters ejected being unmixed with bile, a dose of morphine, — one eighth to one fourth of a grain, — will often immediately relieve.

Other symptoms may occasionally indicate other remedies, but neither time nor space permits my noticing them. I have found the above treatment, in substance, sufficient in all the forms of southern fever where there was an entire remission of febrile excitement every twenty-four hours, however brief the intermission; constituting, in my experience, at least ninety-five per cent. of the cases occurring in the summer and fall.

Under the formerly prevalent ultra mercurial practice, conges-

tive fever raged extensively and fatally in my neighborhood, but fever rarely presented that type at the onset, and never assumed it in my practice; and, fully convinced that the repetition of irritating purgatives endangers the conversion of bilious into congestive fever, I will repeat the caution against their abuse, and recommend, in the cases where evacuations are really required in the course of the treatment, the substitution of injections.

In the form of fever commonly termed nervous or typhoid, characterized by a red and pointed tongue, great thirst, tenderness on firm pressure in the stomach or some part of the bowels, a small, frequent, and tense pulse, retaining that character through the partial remissions which occur once or twice a day, frequently nausea or vomiting, and, in the progress of the disease, stupor and low delirium, the above practice will be useless. After gradually renouncing the use of active medicines, I relied upon cupping or leeching, and the affusion of cold water, with success. The application of half a dozen or more cups over the stomach and bowels, especially where pressure caused pain, repeated till there was improvement, which generally required two, three, or four applications, was usually my first remedy, aided by frequent spongings with cold water. If the abdominal inflammation was not subdued, and an intermission of fever obtained, I then had my patient placed on the floor, and a bucket of cold water poured with moderate quickness over his head and body, dashing some on the abdomen. He was then, without wiping, enveloped in a dry blanket, and placed in bed. As soon as the improvement in the pulse and other symptoms passed away, which was often in half an hour, I repeated the process, and continued the course till the delirium, stupor, heated skin, hard and quick pulse, &c., were permanently removed. Close attention to maintaining the impression, and patience, are requisite. But, by pursuing this course, I have succeeded in many cases where medicine had failed entirely. Injections of cold or warm water have appeared beneficial, and cold water was drank as freely as the patient desired.

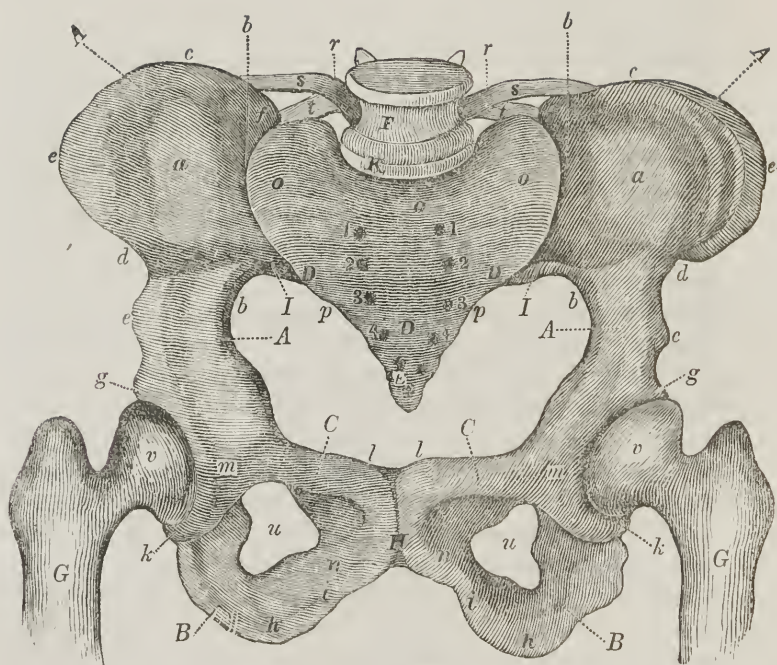
In complying with your desire that I should communicate my mode of treating southern fevers, I have endeavored to express myself so plainly that every reader compelled to depend upon his own judgment in their treatment may understand me, and regret that your space and my time have not permitted my describing it with more minuteness and greater care.

RICHARD ANGELL, M. D.





# PLATE I.



## EXPLANATION OF PLATE I.

*A A A A.* The ossa ilia, properly so called.

*a a.* The iliac fossa.

*b b b b.* The angle which divides transversely and obliquely, from behind forward, the internal fossa of the os ilium into two parts, and makes part of the brim of the pelvis.

*c c c c.* The crista of the ossa ilia.

*e e.* The anterior superior spine of the ossa ilia.

*f f.* The angle formed by the internal lip of the crista of the ilium towards the extremity of its anterior two-thirds; and to which is attached a ligament, inserted at the other end in the transverse apophysis of the last lumbar vertebra.

*g g.* The inferior angle of the os ilium, which makes part of the acetabulum.

*B B.* The os ischium.

*h h.* The tuberosity of the ischia.

*i i.* The branches of the ischia.

*k k.* The posterior parts of the ossa ischia, which make parts of the acetabula.

*C C.* The bodies of the ossa pubis.

*l l.* The angles of the ossa pubis.

*m m.* The posterior extremities of the ossa pubis, which make part of the acetabulum.

*n n.* The ascending branches of the ossa pubis, which unite with those of the ischia.

*D D D.* The os sacrum.

*1 2 3 4.* The anterior sacral holes.

*o o o.* The base of the sacrum.

*p p.* The sides of the sacrum.

*E.* The coccyx.

*F.* The lumbar vertebra.

*r r.* The transverse apophysis of the vertebra.

*s s.* The ligaments which go from the transverse apophyses of the last vertebra to the angle of the internal lips of the crista of the ilia, indicated by the letters *f f*.

*t t.* Two other ligaments, which descend from the same apophyses to the superior edge of the sacro-iliac symphysis.

*G G.* The femurs, or thigh bones.

*v v.* The heads of the femurs, received into the acetabulum.

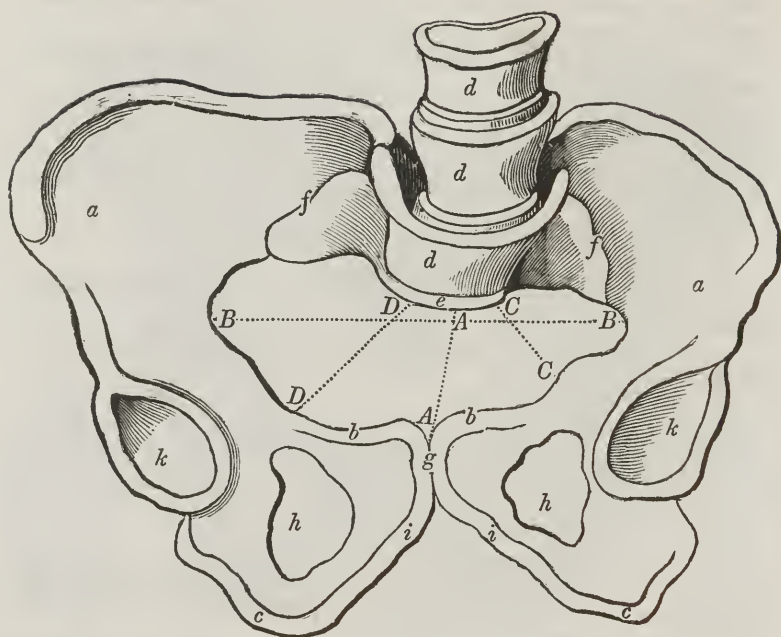
*u u.* The foramen ovale.

*H.* The symphysis of the ossa pubis.

*I I.* The sacro-iliac symphysis.

*K.* The sacro-vertebral symphysis.

PLATE II.



## TREATMENT.

## EXPLANATION OF PLATE II.

This plate represents a deformed pelvis, through which it would be almost impossible to deliver a living child of full growth.

*a a.* The ossa ilia.

*b b.* The ossa pubis.

*c c.* The ossa ischia.

*d d d.* The last lumbar vertebra.

*e.* The projection of the sacrum.

*f f.* The sacro iliac symphysis.

*g.* The symphysis of the pubis.

*h h.* The foramen ovale.

*i i.* The branches of the ossa pubis and ischia, which form the anterior arch of the pubis.

*k k.* The acetabula.

The lines indicate the diameters of the superior strait.

*A A.* The anterior posterior diameter; its natural width reduced to fourteen or fifteen lines, or so many portions, twelve making an inch.

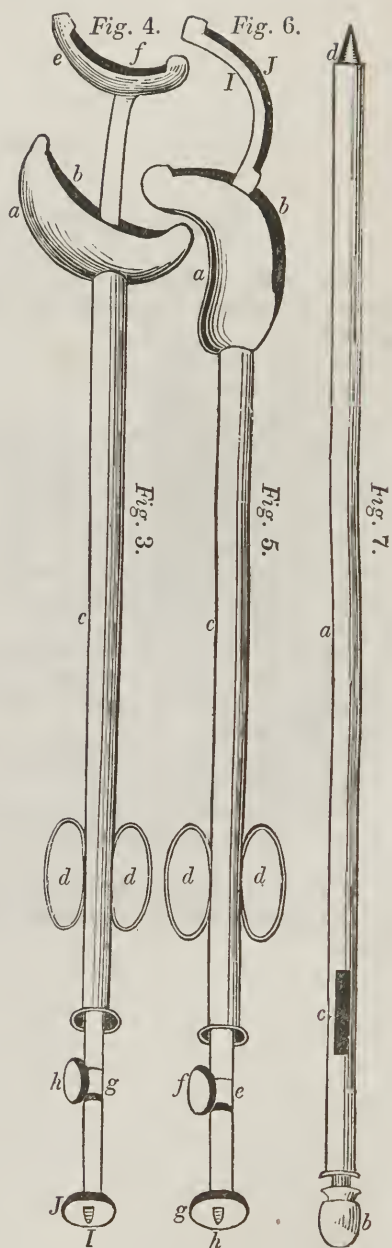
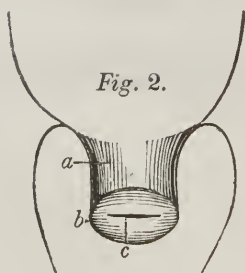
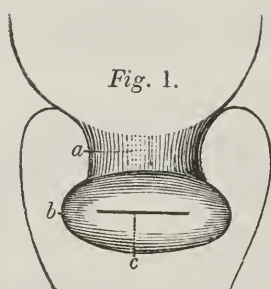
*B B.* The transverse diameter; its length in this plate, four inches and ten lines.

*C C.* The distance from the projection of the sacrum to that of the margin which answers to the left acetabulum, thirteen lines.

*D D.* The distance from the same point of the sacrum to that of the margin which measures to the left acetabulum, twenty lines.



# PLATE III.



## EXPLANATION OF PLATE III.

*Figure 1.*

This figure represents the neck and mouth of the uterus in a state of chronic inflammation.

This species of inflammation often succeeds to a suppression of the menses in girls from cold, or from abortion in married women. It is principally seated in the external covering of the neck of the womb, producing a partial contraction of that membrane, which acts as a broad ligature around the neck of the womb, preventing, in some degree, the free circulation of the blood to and from the *os tincæ*, or lips of the womb; and hence the fulness, or pouted appearance, of these parts. The parts are always more or less tender to the touch; but this cannot be ascertained, except in married women, who always feel more or less tenderness *in coitu*, from the influence which the contracted surface exercises on the neck of the womb. The passage through it is lessened; so much so, in some cases, as to produce painful menstruation; the menstrual fluid being partly retained in the uterus, till the more fluid parts pass off. The remainder escapes in dark colored shreds or strings, giving more or less pain as it passes.

a. The neck of the womb.

b. The *os tincæ*, or lips of the womb.

c. The *os uteri*, or mouth of the womb.

The lines extending above show the shape and size of the womb. The lines extending below, show the cavity of the vagina in that part.

*Figure 2.*

This figure represents the neck, lips and mouth of the womb in a state of chronic contraction, reduced to less than half their natural size.

In this case, the inflammation which terminated in this contraction was uniform throughout the whole surface of the neck and lips of the womb. Thence the contraction is uniform in every part, and every part is reduced in size.

The same cause that produced the state of disease in the figure 1 will produce it in figure 2. The tenderness also exists, as in figure 1. In this disease, however, menstruation is more difficult than in the case figure 1, because the contraction is more permanent and much closer.

The passage to the womb is lessened, and in some cases obliterated, by adhesive inflammation. The membranes of the *os tincæ*, or lips of the womb, not unfrequently grow together, and hermetically seal the passage, so that no fluid can pass. In

other cases, the whole or a part of the tract of the canal is closed by adhesive inflammation; the remedy for which will be spoken of hereafter.

*a.* The neck of the womb.

*b.* The os tincæ, or lips of the womb.

*c.* The os uteri, or mouth of the womb.

The ascending lines show the size of the body of the womb.

The descending lines show the size of the cavity of the vagina in that part.

*Figures 3, 4, 5, 6,*

Are instruments for the purpose of applying caustic to the diseased parts of the neck and mouth of the womb in figures 1 and 2.

*Figure 3.*

*a.* The bowl of the canula.

*b.* The cavity of the bowl.

*c.* The stem of the canula.

*d d.* The wire bows to hold the canula by.

This canula is made of pure silver, and should be nine or ten inches long. The full size is here represented, but not the length.

*Figure 4.*

*e.* The spoon which holds the caustic.

*f.* The cavity in the spoon where the caustic is placed.

*g.* The band that surrounds the stem of the port caustic, which should be also of pure silver; here represented of full size, but should be twelve inches.

*h.* The button that screws through the band, and fastens the stem at any point you please, by slipping it up to the end of the canula.

*I.* The tap that screws on the end of the stem; which can be screwed off, and the button unscrewed and all taken off, and the stem drawn out from above, cleansed, changed, and reinserted, and drawn down so as to hide the bowl of the stem, or port caustic, in the bowl of the canula. Put on the band, and by the screw fasten it close to the canula; then screw the top on the end of the stem of the port caustic, and all will be secure.

*Figure 5.*

*a.* The bowl of the canula.

*b.* The cavity in the bowl of the canula.

*c.* The body or stem of the canula.

*d d.* The bows, made of silver wire, by which you hold the canula.

*Figure 6.*

- e.* The band around the stem of the port caustic.
- f.* The button which, with a neck, screws these upon the stem.
- g.* The tap which screws on the end of the stem.
- I.* The bowl of the port caustic.
- J.* The cavity in the bowl of the port caustic. The size and length of this instrument is the same as those in the one in figures 3 and 4.

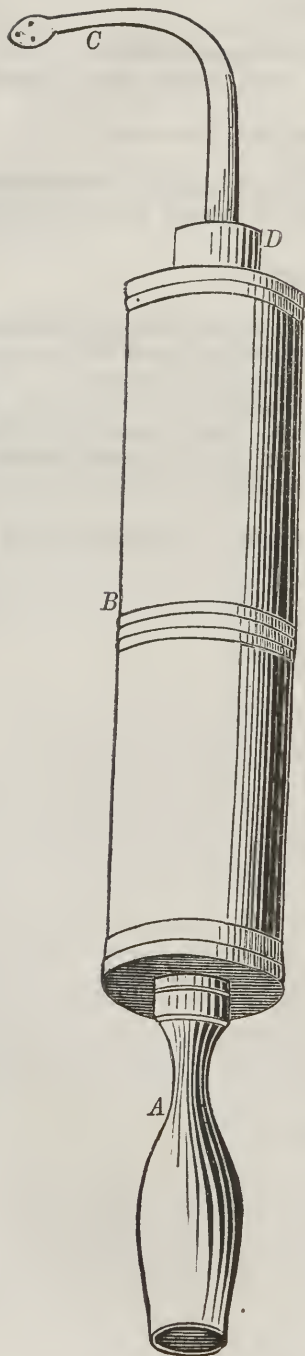
*Figure 7.*

This instrument was constructed for the purpose of dividing the membrane when it adheres over the mouth of the womb; for which purpose we have often used it with success.

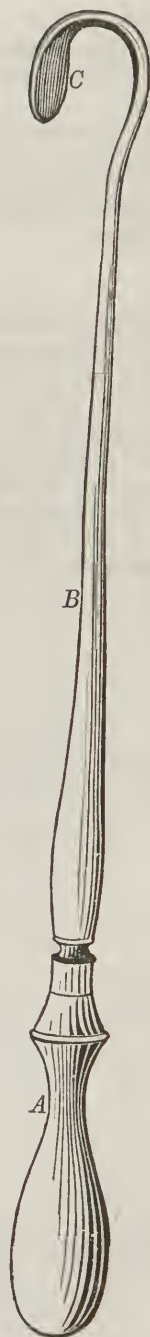
- a.* A silver canula, round in four-fifths of its length, and flattened in the other fifth, toward the lancet point of the stiletto.
- c.* A steel spring, fixed on the stiletto, and rising through a space cut out of the canula, but which can be very easily pressed by the thumb nail.
- d.* The lancet point of the stiletto, projecting beyond the anula.

PLATE IV.

*Fig. 1.*



*Fig. 2.*





## EXPLANATION OF PLATE IV

*Figure 1.*

- A womb syringe, to hold four ounces.  
 A. The handle of the syringe.  
 B. The body of the syringe.  
 C. The point or neck, of half length, and in the proper shape.  
 D. The screws which receive the neck and attach it to the body of the syringe.

*Figure 2.*

Dewees' blunt hoop, for extracting the placenta or after-birth in case of abortion, when the woman is in danger of flooding to death. The curved point, in this instrument, is broader and rounder than that of Dewees' hook. We think it safer in the hands of a midwife, as she cannot hang it in the uterus of the mother.

The whole instrument should be ten inches long; the blade seven inches, and the handle three inches long.

- A. The handle of the instrument.  
 B. The body or stem.  
 C. The hook; which should be half an inch from the curve to the point; large enough to drop over the finger, and half an inch broad in the blade at the point; made round on the edge and point. The whole to be polished and burnished smooth.



## FAMILY MATERIA MEDICA.

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### ALOES, OR ALOE.

THE medicinal article called aloes is a gum. There are three varieties of aloes found in the drug stores in the United States;—the Cape Aloes, the Socotrine Aloes, and the Hepatic Aloes.

The *Cape Aloes* come to us from the Cape of Good Hope; but until lately this species has come to us by the way of Europe. By its excellent qualities, it promises to supersede both the other species, it being so cheap. It is now almost the only species used in practice in the United States. When freshly broken, it has a very dark olive color, approaching to black. It presents a smooth, bright, and almost glossy surface; if held up to the light, appears almost translucent at its edges. The small fragments are semi-translucent, and have a tinge of yellow or red, mixed with the deep olive of the opaque mass. When powdered, it is greenish yellow. The odor is strong and disagreeable, but not nauseous. It has not the slightest mixture of the aromatic. It is perfectly brittle, and easily reduced to powder; but, in very hot weather, it is apt to become a little soft. It is usually imported in casks or boxes.

The *Socotrine Aloes* are produced in the island of *Socotara*, which lies in the Straits of Babelmandel, about forty leagues to the east of Cape Guardafui. But a great deal of the article sold by the name of Socotrine Aloes is prepared in the kingdom of Malinda, upon the eastern coast of Africa. The Socotrine Aloe is in pieces of a reddish brown color, wholly different from that of the former variety. Its surface is somewhat glossy, and its fracture smooth and conchoidal, with sharp and transparent edges. The color of its powder is bright golden yellow. The odor is not pleasant; its taste is bitter, accompanied with a slight aromatic flavor. Like the Cape Aloes, it softens a little in warm weather, or by the heat of the hand.

*The Hepatic Aloes.* This variety is prepared in the West Indies, and in Spain, and is also brought from the ports of India, and particularly from Bombay. This species is of a reddish brown color,

out is darker and less glossy than the former species. It derives its name from the supposed resemblance it bears in color to that of the liver. Its odor is disagreeable and nauseous, wholly unlike that of Capé Aloes, and without the aromatic flavor of the Socotrine. The taste is nauseous and intensely bitter. The fracture is not so smooth, nor the edges so short, as the former species. It softens in the hand, and becomes adhesive. The powder is of a dull, olive, yellow color. It is not fit for medical purposes; it is mostly given to horses and cattle.

The *Aloe Spicata*, or *Cape Aloes*, to which the other species all bear a close resemblance, has a round stem, three or four feet high, about four inches in diameter, and leafy at the summit. The leaves are spreading, subverticillate, about two feet long, broad at the base, and gradually narrowing to the point, channelled or grooved upon their upper surface, and with remote teeth upon their edges. The flowers are of a scarlet color, and bell-shaped, and spread horizontally in very close spikes. They contain a large quantity of purple honey-juice. The plant grows in a sandy soil. In some districts of the Cape of Good Hope it grows spontaneously, and requires not the least culture. It suits the lazy Hottentots, who collect and prepare the juice of the plant for market. They cut off the leaves, and so arrange them that one conducts to the other, till they catch the juice in a general reservoir. But, in some cases, the juice is expressed from the leaves previously cut in pieces. The liquor is inspissated in iron vessels, and when of a proper consistence, is poured into casks which contain from one to three hundred pounds. In this way it is sent to market.

*Medical properties and uses.* The aloe has been used as a medicine almost from time immemorial. It is a valuable purgative, in doses of from ten to twenty grains. It is apt to gripe when given alone; but when combined with aromatics, this property is obviated. If given in pills combined with an alkali or soap, it does not affect the lower bowels. It is a good vermifuge, and frequently removes worms in great numbers. It is one of those purgatives that, while it purges, strengthens the bowels. It enters into almost all the popular pills, and those in common use in the shops. It is, to a certain extent, emmenagogue. If dissolved in spirits combined with ginger, it may be taken in tea spoonful doses, in water, as an aperient. It removes costiveness, and gives tone to the bowels. It is a valuable medicine, and may be kept in every family, and used with safety.

## INDIAN HEMP.

The hemp has long been known in India as a powerful intoxicating plant. It has, in consequence, a variety of names applied to it in Arabia, some of which have been transmitted to us: as "*leaf of delusion*," "*increaser of pleasure*," "*exciter of desire*," "*cement of friendship*," &c. Linnæus was well acquainted with its "*vis narcotica plantastica dementius*." In 1839, *Dr. O'Shaughnessie* directed attention to it as a valuable remedy in rheumatism, tetanus, cholera, and infantine convulsions, and published some cases treated by himself; so, also, did *Dr. O'Brien* and *Dr. Bain*.

The effects of the hemp, in the treatment of tetanus, are giddiness, intoxication and sleep, during which the tetanic paroxysm ceases; although it returns again when the patient awakes, but with diminished violence, and may be again removed by a repetition of the medicine. The effects, however, of the hemp have not been so satisfactory in this country, owing, no doubt, to the difference in the American and the Indian hemp. In all probability, however, the time is not far distant when the extract of the Indian hemp will be brought to this country, and become a valuable remedy in the treatment of disease here. I therefore have inserted it with a formulary for its use.

*Recipe:* Tincture of the Extract of the Indian Hemp, fifteen drops.  
Rectified Spirits, forty-five drops.

Mix for a dose. This should be either swallowed from the bottle, or taken on a little sugar, and swallowed instantly. It should never be given in water, as the resin will leave the water and adhere to the side of the vessel in which it is taken, and disappointments in its effects will consequently result. *Dr. Donovan* says it always produces either great joy and hilarity of spirits, or a deep depression and melancholy; but all of these effects cease when the effect of the medicine dies in the system. The patient should always be apprised of the expected effect before the medicine be given. All writers on Indian hemp agree in its exciting hunger, and this often in a voracious degree. *Dr. Donovan* expresses his belief that Indian hemp will, before long, occupy one of the highest places among the means of combating disease. This is one of the new remedies not known in our systematic writings.



## MATICO.

This is also a foreign plant, and a new remedy. It is a native of Peru. *Dr. Jeffreys*, of Liverpool, is the first physician who has called the attention of the European practitioners to the medical virtues of the matico. The medical practitioners of Peru esteem the matico as a valuable remedy in many diseases, and especially in diseases of the kidneys and bladder, as hemorrhage from the bladder, &c. The botanical history of this plant is but little known as yet in this country, but it will not be long before we shall have both it and its history. In the *Flora Peruviana* it is described as a *piper*. The stems are woody, round, and pubescent; the leaves sessile, acuminate-lanceolate, rugose, and crenate; their upper surface of a dark green, and their lower of a paler green color. It is said that the name of the plant is derived from a Spanish soldier named *Matico*, who, lying desperately wounded, and bleeding to death, in his agony caught accidentally some of its leaves, and by their application arrested the hemorrhage and healed the wound. The leaves have a strong aromatic, and slightly astringent, taste. From the experiments which *Dr. Hodges* has made, he concludes that they contain the following constituents: 1st. Chlorophylle. 2d. A soft dark green resin. 3d. A brown coloring matter. 4th. A yellow coloring matter. 5th. Gum, and nitrate of potash. 6th. A bitter principle, which he calls *maticine*. 7th. An aromatic volatile oil. 8th. Salts. 9th. Lignin. The leaves of the matico are easily reduced to a fine powder, which has the color of senna. It may be administered in sirup or honey, though only adapted to a pristine prescription, as the essential oil, in which, in all probability, the active medical properties reside, would be rapidly dissipated by keeping. The cold effusion, as it extracts all the medical properties of the plant, seems to be the best form in which it can be prepared. The dose is about the strength of one drachm of the dried leaves infused in a gill of water, and taken at a draft, and repeated three or four times in a day; or the leaves may be powdered fine, and applied to a bleeding wound; or the juice may be applied as a styptic and an arrester of hemorrhage. *Dr. Jeffreys* says, "The matico is a valuable remedy in gonorrhœa, leucorrhœa, menorrhagœa, or bleeding from the uterus, bowels, or bladder. The dose for internal use is half an ounce of the leaves, simmered for some time in a pint of water,

till the strength is extracted. Two table spoonfuls may be taken every three or four hours. He gives a case of excessive uterine hemorrhage cured by it, in a few days, after all other remedies which had been administered had failed. It may be used in the form of a decoction as an injection in leucorrhœa. From the trials that have been made with this article, it bids fair to come into general use, and to prove a valuable acquisition to the list of remedial agents.

## TINCTURE OF HYOSCYAMUS.

Take of,  
Henbane dried leaves, four  
ounces.  
Diluted Alcohol, one quart.

Macerate fourteen days, and filter through paper.

This tincture may be administered as a substitute for laudanum, where the constipating effect of the latter is wished to be avoided. It is slightly purgative. The dose is a fluid ounce, and may be repeated as often as laudanum would be admissible. If it purges too much, a few drops of laudanum may be added to it.



*Black Snakeroot.*

## BLACK SNAKEROOT—RATTLE WEED—COHOSH.

*Actea Racemosa. Cimicifuga.*

This is a tall, stately plant, having a perennial root, and a simple herbaceous stem, which rises from four to eight feet in height. The leaves are large, and ternately composed, consisting of oblong ovate leaflets, ensised and toothed at their edges. The flowers are small, white, and disposed in a long, terminal,

wand-like raceme, with occasionally one or two shorter racemes near its base. The calyx is white, four-leaved, and deciduous; the petals are minute, and shorter than the stamens; the pistil consists of an oval germ and a sessile stigma. The fruit is an ovate capsule, containing numerous flat seeds. The *black snakeroot*, *cohosh*, or *rattleroot*, as this plant is familiarly called by the people in the country, is a native of the United States, growing in shady and rocky woods, or rich hillsides, from Canada to Florida, and flowering in June and July. The root is the part employed. This, as found in the shops, consists of a thick, irregular, bent, or contorted body or caudex, from one third of an inch to an inch in thickness, often several inches in length, furnished with many slender radicles, and rendered exceedingly rough and jagged in appearance by the remains of the stems of successive years, which, to the length of an inch or more, are frequently attached to the root. The color, externally, is dark-brown, and white within. The taste is bitter, herbaceous, and somewhat astringent, leaving a slight sense of acrimony. The root yields its virtues to boiling water.

*Medical properties and uses.*—The *racemosa* unites with a tonic power the property of stimulating the secretions, particularly those of the skin, kidneys, and mucous membrane of the lungs. It is thought by some to have some influence upon the uterus. But its best and especial medical properties are found in its salutary effects upon the nervous system, in neuralgia of the heart, in sciatica, and other forms of rheumatism. It is equal, if not superior, to the *colchicum* in rheumatism, and far superior to it in neuralgia of any description. I have used it extensively in those cases, and with the happiest effects. I cured myself of a severe sciatica in twenty-four hours with it; but the dose was too large, producing violent sickness, great prostration, nausea, vomiting, and profuse perspiration. I took three or four drachms of the saturated tincture at one dose; but it effected the cure completely. When properly prepared, it acts upon the stomach and bowels powerfully, and its full effects are not obtained till it purges freely. The following is the best formulary for its preparation:

*Recipe:* Powdered Root, half pound.  
Alcohol, one pint.

Mix, and macerate for twenty days, and filter. One teaspoonful should be taken three times a day, in sweetened water. The dose may be increased or diminished, so as to produce three or four operations on the bowels in twenty-four hours. I have

seen some persons it would not purge. It sometimes produces vertigo before it begins to purge, but these symptoms will all subside after the purging commences. It will cure if it does not purge. Several cases of St. Vitus' dance are recorded by *Dr. Jesse Young*, in which it performed cures after other remedies had failed. It is usually administered in decoction by the country people. One ounce of the powdered root is boiled in a pint of water, for a few minutes, and a small wine glassful given from three to five times a day, according to its effect.



BONE-SET, OR THOROUGHWORT. *Eupatorium Perfoliatum*.

This is an indigenous perennial plant, with numerous herbaceous stems, which are erect, round, hairy, from two to five feet high, simple below, but branching, with a large spreading top. The leaves are peculiar, and serve to distinguish the species at the first glance. They come out opposite each other, or rather straddle or surround the stem. They are long and pointed; rough, green, and tolerably thick. They are narrow when

compared with their length. The flowers are an ashy white, small, and stand in clusters on the ends of the small branches. It flowers in summer and autumn. It grows abundantly on the borders of marshy places, especially in meadows and pasture land, and in the fence-corners.

*Medical properties and uses.*—Thoroughwort is tonic, diaphoretic, and, in large doses, emetic and purgative. It is good in intermittent fevers, to break the chill. If given in large doses, in the form of warm tea, as the chill comes on, it will puke and purge; then in less doses, a little warm, it will sweat the patient freely; then in large draughts, taken cold, it acts as a fine tonic, and prevents the return of the chill. It is good in pleurisy, as a sweat, or in bad cold. It also is good when made into a sirup for bad coughs, and in some forms of consumption, where the patient is weak, and the skin hot and dry. It grows in almost every part of the United States, but mostly in the western and southern divisions. It should be gathered in September. Every part of the plant is medicinal, but the leaves and flowers are best. It should always be given in the form of tea.

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## CLINKERS.

Clinkers are the refuse of the blacksmith's forge, and differ from common ashes and coke in their greater specific gravity, component parts, and external appearance. As a medicine in cachectic disorders, particularly those of females, they have been used for many years by knowing old women in certain manufacturing districts in England; and the success which attends their exhibition, particularly in chlorotic disorders, is such as to have won for them the title of "specific." They should be prepared in the following manner. The bluest and heaviest clinkers—(iron scales on the anvil block)—being selected, are reduced to an impalpable powder;—a work of no small difficulty on account of the metalloïd nature of the scales. Any quantity of this powder may be mixed with a sufficient quantity of molasses or honey to form a stiff mass, and to every eight ounces of this mass half an ounce of magnesia and half an ounce of ground ginger must be added. Thus formed, it is anything but inviting to the eye. The dose is a tea spoonful morning and evening, for three days; then omit it for three days, and so continue till



the cure is performed;—till the cachectic symptoms are removed, the catamenia established, the blood improved, and the digestive powers restored and established.

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### PRECIPITATED CARBONATE OF IRON.

The precipitated carbonate of iron is an excellent preparation, and very agreeable to the taste. The formula for its preparation is as follows :

*Recipe:* Carbonate of Soda, one drachm.  
Water, four ounces.  
Muriated Tincture of Iron, one drachm.

Mix, and take the medicine while it is effervescing. If it be allowed to stand till the effervescence ceases, the iron will fall to the bottom of the vessel, and, consequently, but little will be taken. Although the quantity of the carbonate of iron thus taken is not large, yet it is in such a state of minute division,—it being combined with a portion of muriate of soda equally minute,—that it answers the purpose of a chalybeate, when thus given, much better than large doses of the carbonate of iron, which few stomachs will readily bear. It is good in all those cases of lupus, or spreading sores of the face, so common to children. It may be used in those cases both internally and externally. It causes no derangement of the stomach.—*From the Dublin Medical Press for 1840.*

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### CITRATED AROMATIC WINE OF IRON.

The formula for this preparation of iron is contained in the *Pharmacopœia Wurtembergia*, published in 1798. Mr. Gore, of Limerick, has furnished us with the recipe for the making of this most invaluable preparation of iron.

*Recipe:* Iron Filings, four ounces.  
Four Seville Oranges, (seeded.)  
One fine Lemon.

Cut the lemon and oranges fine, and beat them up together in a mortar with the iron-filings, and put all into an open-mouthed bottle or jar. Let them stand two or three days, stirring them every day. Then add ten ounces of good Madeira wine, and two ounces of spirit of orange peel. Digest fourteen days, and express and filter. A fine, dark-colored, aromatic fluid is the

result, highly chalybeate, and very agreeable, not only as to the taste left in the mouth, but the sensation it produces in the stomach. It is a compound of proto and per-citrate of iron, with, perhaps, a little tartrate from the wine, saccharine matter, mucilage, and essential oil. This, when sweetened, will not be rejected by the most delicate stomach. This preparation is useful as an emmenagogue, and in all forms of chronic affections of the uterus, and obstructed menstruation, and in cachectic conditions of the system. It is good in those forms of dyspepsia where the digestive powers are weak, and no acid, or but little, is found in the stomach. The dose is a tea spoonful three times a day, in sweetened water.

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### POISON BY ARSENIC.

HYDRATED SESQUIOXIDE OF IRON, AND HYDRATED PEROXIDE OF IRON,  
ITS ANTIDOTES.

These medicines are complete antidotes to the poison of arsenic. They are prepared in the following manner: A quantity of sulphate of crystallized iron (copperas) is to be boiled in nitric acid so long as orange fumes are given off; then dilute and filter the liquor, and then precipitate it by an excess of ammonia. The alkali throws down the hydrated sesquioxide as a reddish precipitate, which must be carefully washed by decantation. It must not be filtered. The precipitate must be allowed to deposit for several days, and, after the decantation of the supernatant liquid, the precipitate is to be kept under water, in glass-stopped bottles. Twelve grains of the hydrated sesquioxide of iron, in a soft state, will destroy one grain of arsenic. The dose should, therefore, be regulated according to the quantity given, or taken, of the arsenic, and it may be repeated every fifteen or twenty minutes, or as often as the patient pukes, until it ceases, and no pain is felt; then a dose of castor-oil may be given; but the iron frequently operates on the bowels. The sooner this medicine is taken after the poison the better; but it may be taken at any time as long as there is any pain in the stomach or bowels. The drink should be mucilaginous, such as flax-seed or slippery-elm tea. Every farmer should keep a portion of this antidote always in his house, as he can, by the above direction, make it himself. It is innocent and safe. If large doses are given no harm will result from it; therefore enough should always be given to be sure to neutralize the poison. — *Author.*

## POISON BY COPPER.

## CARBONATE OF SODA, ITS ANTIDOTE.

A strong solution of the carbonate of soda, taken freely, will form, with the salts of copper, an insoluble carbonate, having no deleterious action on the system whatever, and so neutralize the poisonous effects of the copper. The white of an egg may be resorted to when the soda cannot be had, which takes up the copper, and so neutralizes its effects.

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## POISON BY OPIUM OR MORPHINE.

## COFFEE, ITS ANTIDOTE.

A gill of the strong infusion of coffee should be taken cold, and frequently repeated, till all the bad symptoms are removed. It stops the vomiting, removes the prickling sensation on the skin, and cures the patient. This has been satisfactorily proved, by *Dr. Fosgate*, to be an effectual remedy, and it is always at hand, in every family. But in cases where laudanum has been taken in large quantities, and several hours have elapsed, and the patient is not capable of swallowing the coffee, the stomach-pump should be used, and, after the stomach is emptied by the pump, the coffee should be injected, and strong shocks of electricity should be passed through different parts of the head, spine, and body, and into the end of the nose. This remedy has resuscitated the patient when, to appearance, all hope was gone. It should be persevered in for some time.

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POISONING BY CORROSIVE SUBLIMATE, COPPER,  
OR LEAD.

The hydrated sesquioxide of iron is an antidote, given in the same way that it is prescribed for poisoning by arsenic. Twelve grains of the moist preparation to one grain of the poison should be given, and repeated frequently till all the unfavorable symptoms are removed. As this preparation of iron is innocent, it may be continued till there is an assurance that the poison is all neutralized. The white of an egg neutralizes corrosive sublimate. It may be given freely in its raw state.

## POISONING BY PRUSSIC ACID.

This poison is so powerful, that, when taken in a large dose, no remedy can arrest its effects. But, where life is not destroyed instantly, the patient should be immediately subjected to large quantities of cold water, dashed on the spine and head. This should be repeated till full signs of resuscitation are manifest. Then, an emetic of ground mustard should be given, or the sulphate of zinc, where it is convenient. The stomach-pump should be used. Cataplasms of mustard should be applied to the arms and legs, and injections of gruel and spirits of turpentine. Brandy and ammonia should be given freely internally. There are chemical antidotes for this poison, but they will answer better in theory than in practice. They show off better in a glass tumbler than they will in the human stomach, — for there is no time to use them.

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## LEE'S ANTI-BILIOUS PILLS.

Socotrine Aloes, one drachm.  
Scammony, thirty-five grains.  
Gamboge, thirty grains.  
Calomel, twenty-five grains.  
Castile Soap, ten grains.  
Mucilage Gum-Arabic, sufficient to form a pill mass.

Form twenty-six pills. From four to six of these pills are a dose. They are good in bilious fever, or in any case where the liver is inactive.

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## CHALK JULEP.

Gum-Arabic, half an ounce.  
White Sugar, half an ounce.  
Spirits of Lavender, two drachms.  
Tincture of Opium, half drachm.  
Pure Water, eight ounces.

Mix. Dose for an adult, a table spoonful after each loose stool, till the bowels are properly regulated. Children take less, according to age. The stomach should always be cleansed before any medicine of this description is used, either by grown persons or children.



## BAYBERRY, OR WAXBERRY.

This is a shrub. It is cultivated plentifully in towns, especially on the sea-coast. It is also found in the interior, in old fields that have been turned waste, and on the side of stony hills. It grows in the New England States from three to five feet high. It bears small berries in clusters on the branches. The pulp of these berries, combined with tallow, forms a very good candle. The bark of the root is the only part used for medical purposes, and should be gathered in the autumn, just before the leaves fall, or in the spring, before they appear. The roots should be thoroughly cleansed from dirt, and while green the bark may be beaten off with a wooden mallet, and should then be carefully dried, and pulverized very fine, and kept in a bottle stopped tight.

*Medical properties and uses.*—The bark of the bayberry root



is both astringent and stimulant, producing a pungent sensation on the tongue and fauces. It is a good remedy in cankered sore mouth, in which case it may be used freely in the form of a wash or gargle. It is freely used in bowel complaints by some practitioners, and is said to be a valuable remedy. It is a good dentifrice for cleansing the teeth and mouth and sweetening the breath.

*Dose.* — One drachm of the powder, in sirup, repeated every two or three hours; or a tea may be made, of the strength of an ounce to a pint of water, and taken freely.



BALMONY. *Chelone Glabra.*

Or, as it is sometimes called, snake's-head. This plant is found in low, damp places, where the soil is rich and shaded. It grows

in all parts of the United States. It is called bitter herb by some. The flowers grow in clusters, and are of a reddish white color. It blooms late in the fall of the year.

*Medical properties and uses.*—It is both tonic and laxative; and is good in debility of the digestive organs, dyspepsia, loss of appetite, &c. It is also given to children for worms. It is used in jaundice and yellowness of the skin. It is taken in the form of tea; a gill may be drank three or four times a day, made in the proportion of an ounce of the root to a pint of water.



BITTER-ROOT, OR SILKWEED. *Aprocynum Canabinum*.

There are two species of the bitter-root or silkweed; one has a purple or flesh-colored stem, and the other a green stem; one grows in wet soil, and the other in light, sandy soil. They are to be found abundant in all parts of the United States. The silkweed has simple stems, from three to five feet high, with opposite, lanceolate, oblong, petiolate leaves, downy on their under surface. The flowers are large, of a pale purple color, sweet-scented, and arranged in nodding umbels, which are two or three in number. The pod or follicle is covered with sharp

prickles, and contains a large quantity of silky-seed down. It grows plentifully on the sandy banks of streams. It flowers in July and August. It throws out a white juice when wounded, from which circumstance it is frequently called *milkweed*. The roots are very long, dark without and white within, and very bitter.

*Medical properties and uses.*—The root is the part used, and is emetic, cathartic, and somewhat anodyne. It is used, in the form of a bitter, in asthma and catarrh. It is also used in cough and dyspepsia, and much in rheumatism. It may be taken in the form of bitters, in the quantity that will purge gently or freely, or in powder, in twenty grain doses, three times a day; or it may be given in strong infusion,—an ounce of the root to a pint of water,—and drunk in such doses as the stomach will conveniently bear.

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PLEURISY ROOT—BUTTERFLY WEED. *Asclepias tuberosa*.

The root is perennial, and gives origin to numerous stems, which are erect, ascending, or procumbent, round, hairy, of a

green or reddish color, branching at the top, and about three feet in height. The leaves are scattered, oblong, lanceolate, very hairy, of a green or reddish color on their upper surface, and paler beneath, and supported only on short footstalks. The flowers are of a beautiful reddish or orange color, and disposed in terminal or lateral corymbose umbels. The fruit is an erect, lanceolate follicle, with flat ovate seeds, connected to a longitudinal receptacle by long silky hairs. This plant differs from the other species of the *eschepias* in not emitting a milky juice when wounded. It is indigenous, growing in all parts of the United States. It blooms in the months of June and July, exhibiting a splendid appearance. It grows abundantly in all the Southern States. The root is the only part used in medicine, and is large, irregular, tuberous, branching, often fusiform, fleshy, externally brown, internally white, and striated; and, in the recent state, of a sub-acrid, nauseous taste. When dried, it is easily pulverized, and has a bitter, but not otherwise unpleasant taste. It yields its virtues readily to boiling water.

*Medical properties and uses.*—It is diaphoretic and expectorant, without being stimulant; in large doses it is cathartic. It has long been employed by the regular faculty as a valuable medicine in pleurisy, catarrh, pneumonia, consumption, and other diseases of the breast, and is evidently useful in all these cases, and in various forms of fever, if used after the stomach has been well cleansed. It is also good in acute rheumatism, and in our autumnal fevers. *Dr. Eberle* speaks of it in high terms in his practice; he used it in dysentery. It is good in pains in the stomach arising from colic, indigestion, or dyspepsia. It may be given in the form of a strong tea, or in powder. If in powder, from twenty to sixty grains may be given several times a day, in sweetened water. In all cases where it is given as a sudorific, it should be continued till the patient sweats freely. It possesses an advantage over many other medicines; it can be freely taken even in high fevers, and not increase, but always diminish them.

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### HAIR OIL.

Lard Oil, half pint.  
Spirits Hartshorn, half an ounce  
Oil Roses, ten drops.  
Tincture Musk, twenty drops.

Mix well. This is a good hair oil.



LOBELIA—INDIAN TOBACCO—PUKEWEED--EYEBRIGHT, &c. *Lobelia Inflata*.

The lobelia, or Indian tobacco, is an annual or biennial indigenous plant, usually a foot or more in height, with a fibrous root, and a solitary crest, irregular, very hairy stem, much branched about midway, the centre stem rising much above the summits of the branches. The leaves are scattered, sessile, oval, acute, serrate and hairy. The flowers are numerous, disposed in leafy terminal racemes, and supported on short axillary footstalks, of a light-blue color. The border is labiate, with the upper lip divided into two, and the lower into three acute segments. The united anthers are covered, and enclose the stigma. The fruit is an oval, striated, inflated capsule, crowned with the persistent calyx, and containing, in two cells, numerous very small, brown seeds. This species of lobelia is very common, growing on the roadsides, and in pastures and stubble-fields, throughout the United States. Its flowers begin to appear about the end of



July, and continue to expand in succession till the occurrence of frost. The plant, when wounded or broken, exudes a milky juice. All parts of it are possessed of medical activity; but according to *Dr. Eberle*, the root and inflated capsules are most powerful. The plant should be collected in August or September, when the capsules are numerous, and should be carefully dried. It may be kept whole or in the state of powder. When green, it has a pungent, acrid, nauseous taste, but when dry, less so. When chewed, it is at first without much taste, but soon produces a burning acrid impression upon the posterior parts of the tongue and palate, very closely resembling that produced by tobacco, and attended, in like manner, with a flow of saliva and a nauseating effect upon the stomach. *Lobelia* imparts its qualities readily to water or alcohol.

*Medical properties and uses.* — *Lobelia* is emetic, cathartic, and, in small doses, diuretic and expectorant. It also possesses narcotic properties. Every part of the plant possesses medicinal properties, but the root and capsules are the most active. *Lobelia* is a medicine of so much activity that it should be used with caution and discretion. *Dr. Cutler*, of Massachusetts, first attracted the attention of the medical profession to its use, in this country. The dose of the powder, as an emetic, is from five to twenty grains, repeated once in ten minutes, till the emetic effect is produced; or the tincture may be given in the quantity of half a fluid ounce, and repeated as above. These are doses for an adult. Children must have less in proportion to their age. It is a valuable emetic in asthma, or even in doses below the puking point it proves a valuable medicine; also in croup in children. In cases of poisoning it acts admirably, its emetic effects are so quick. In small doses it acts as a diuretic; and it is useful in dropsy.

There are two other species of *Lobelia*; — the *L. Cardinalis*, or Cardinal Flower, — the flowers are red and showy, — and the *L. Syphilitica*. But the *Lobelia Inflata* is the only species that is highly medicinal.

## WINTERGREEN, OR PYROLA.

See page 923, for Engraving.

This is an evergreen, and is found in pine woods, and in light shady soils, in all parts of the United States. It blossoms in mid-summer. It is called pipsisseway, pyrola, white leaf, &c. The whole plant has rather a pungent and bitter taste.

*Medical properties and uses.*—It is diuretic, sudorific and tonic. It is useful in all eruptive forms of disease, especially in scrofula and cancer. A strong decoction may be made of the leaves and twigs, and a gill may be drunk three times a day. Many cures of old ulcers, sore throats and such like affections, have been ascribed to the use of the pipsisseway. It must be remarked that this wintergreen is very different from the wintergreen, generally so called, of the Western States.



VIRGINIA SNAKEROOT. *Aristolochia Serpentaria*.

This species is an herbaceous plant, with a perennial root, which consists of numerous slender fibres, proceeding from a short horizontal caudex. Several stems often rise from the same root; they are about eight or ten inches in height, slender, round, flexuose, jointed at irregular distances, and frequently of a reddish

or purple color at the base. The leaves are oblong, of a pale yellowish-green color, and supported on short petioles at the joints of the stem. The flowers proceed from the joints near the root, and stand singly on long, slender, round-jointed peduncles, which are sometimes furnished with one or two small scales, and bend downwards, so as nearly to bury themselves in the earth or dead leaves at the root of the stalk. The flower is of a purple color. The plant grows in rich, shady woods, throughout the Middle, Southern and Western States, abounding in Ohio and throughout the great valley of the Mississippi. It flowers in May and June. The root is the part used in medicine. It should be gathered in the fall, or when the plant is in bloom.

*Medical properties and uses.*—It is stimulant, tonic, diaphoretic and diuretic, according to the mode of its application. If taken too largely, it occasions nausea and griping pains in the bowels. It is admirably adapted to the treatment of typhoid fevers, whether they be idiopathic or symptomatic. When a gentle stimulus and tonic is required, and the potent remedies cannot be used, then the snakeroot is admirably adapted to the case. It is good in all eruptive fevers where the eruption does not come out well, or where it has been out and has receded from any cause, as in measles, scarlet fever, chicken-pox, or any of the forms of rash, and even in smallpox. It may be given in substance or in tea. The dose of the powdered root is from ten to thirty grains, according to the age and strength of the patient; but the infusion is preferable. Half an ounce of the root may be simmered for a few minutes in water, and two table spoonfuls given every half hour, or hour, according to the demand of the case. It enters into several valuable tinctures. (See formularies in the back of the book.)

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## EXTEMPORE GASEOUS CHALYBEATE WATER.

Pure Sulphate of Iron, two drachms.  
White Sugar, three drachms.

Pulverize, mix, and divide into twelve powders. Take

Super Carbonate of Soda, two drachms.  
White Sugar, three drachms.

Mix, and divide into twelve powders. One of each is mixed in half a tumblerful of water, and poured together, and drank while effervescing. This is a pleasant drink, and a good tonic for a weak stomach.



AMERICAN GINGER—WILD GINGER—INDIAN GINGER—CANADIAN SNAKEROOT—HART SNAKE-ROOT—COLT'S FOOT, &c. *Asarum*.

The American *asarum* closely resembles the European in appearance and properties. It has a long, creeping, jointed, fleshy, yellowish root, furnished with radicles of a similar color. The stem is very short, dividing, before it emerges from the ground, into two long, round, hairy leaf-stalks, each of which bears a broad, kidney-shaped leaf, pubescent on both surfaces, of a rich, shining, light-green above, varied and pale, or bluish beneath. A single flower stands in the fork of the stem, upon a hairy, pendulous peduncle. The flower is often concealed by the loose soil or the decayed vegetable matter at the root of the plant. The flower is of a deep brownish color on the inside. It grows in all the Eastern, Middle and Southern States, also in the Western States.

*Medical properties and uses.*—The root is aromatic, stimulant, and tonic, with diaphoretic properties, applicable to cases similar to those in which the Virginia snakeroot may be used. It may be substituted for ginger. It is emmenagogue and emetic. It enters into the composition of tonics in the form of tincture. The dose is from ten to thirty grains in powder of the root, and more of the leaf. It should always be used fresh, if possible, though it may be kept by carefully drying, and stopping close in bottles. The infusion is perhaps the preferable way to use it, especially in painful menstruation. It should never be boiled, as that destroys its medical properties.

### TINCTURE OF ACONITE.

Sound, greenish-looking leaves,  
dried, two ounces.  
Alcohol, one pint.

Macerate for fourteen days, and filter.

*Medical properties and uses.*—This is too powerful a medicine to give internally, except by a physician; but any person may apply it externally for the relief of neuralgic or rheumatic pains. A large tea spoonful may be rubbed in, over a pain, twice a day. It should be applied with a small mop. It gives great relief, as I have often witnessed in such cases.



*Ladies' Slipper.*

### LADIES' SLIPPER—NERVEROOT—YELLOW UMBEL, &c. *Valerian.*

There are three or four species of Ladies' Slipper, as the white, red, and yellow, (so called from the color of their flowers,) but



the qualities are the same. It grows from one to two feet high, and sometimes has leaves all the way up the stalk; but more frequently they lie on the ground. The stalk has one flower on it, in the form of a purse, or round bag, with a small entrance near where it joins the stalk, and is something like a moccason slipper, from which resemblance it probably derived the name of "ladies' slipper." The roots are fibrous, and thickly matted together. It is found in all parts of the United States. The roots have a bitter, mucilaginous taste, and a peculiar and somewhat nauseous smell.

*Medical properties and uses.*—It is sedative and anti-spasmodic, and is a valuable remedy in all nervous and hysterical affections. It allays pain and quiets the system. It is good to relieve spasmodic cramping pains in labor. In irritable states of the system, it calms the nerves and induces sleep. It is good in nervous headache. It may be used either in substance or in tincture. The tincture should be ethereal. The root should be gathered in the fall, or early in the spring, before the stalk shoots; it should be dried in the sun, pulverized, and closely stopped in bottles for use. The dose of the powder is from thirty to sixty grains, repeated every two or three hours. The tincture is made by putting four ounces of the root to a pint of ether, and macerating fourteen days. A tea spoonful is a dose, given in water, and repeated every ten, twenty or fifty minutes.

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## CURE FOR CHAPS IN THE HANDS.

Pure Olive Oil, one ounce.  
Yellow Bees-Wax, half a drachm.

Melt the bees-wax in the oil, with a very gentle heat, and when melted, stir in

New Honey, one drachm,  
White Flowers of Zinc, half a drachm,

and keep stirring till cold.

After well washing and drying the skin, a little of this cerate should be gently but briskly rubbed into the parts with the palm of the opposite hand, so as to reach the bottom of the cracks, and then wiped off with a dry towel, leaving no traces of grease on the skin. This process should be repeated at bedtime, while sitting near the fire, and after each washing; and the rubbing should be continued each time, provided it does not cause bleeding, until the chapped skin is quite warm.

BLOODROOT. *Sanguinaria.*

This plant is commonly called percoon root. It is an herbaceous perennial plant. The root is horizontal, abrupt, often contracted, about as thick as the finger, two or three inches long, fleshy, of a reddish-brown color on the outside, and brighter red within. It is furnished with numerous slender radicles, and makes offsets from the sides, which succeed the old plant. From the end of the root arise the scape and leaf-stalks, surrounded by the large sheaths of the bud. These spring up together, the folded leaf enveloping the flower-bud, and rolling back as the flower expands. The leaf, which stands upon a long, channeled petiole, is vineform, somewhat heart-shaped, deeply lobed, smooth, yellowish-green on the upper surface, and pale on the under, and strongly marked by orange-colored veins. The scape is erect, round and smooth, rising from four to eight inches in height, and terminating in a single flower. The petals vary in number from

seven to fourteen, and are mostly white, but sometimes lightly tinged with rose or purple. The stamens are numerous, with yellow filaments, shorter than the corolla, and orange, oblong anthers. The capsule is oblong, acute at both ends, two-valved, and containing numerous oval reddish-brown seeds. The whole plant is pervaded by an orange-colored sap, which flows from every part when broken, but is of the deepest color in the root. The bloodroot is one of the earliest and most beautiful spring flowers in North America. It grows in rich, light soil, and is to be found abundantly throughout the United States. It flowers in March and April. After the fall of the flower, the leaves continue to increase in size, and by midsummer the plant bears an entirely different aspect. The whole plant is highly medicinal, but the root only is officinal. It should be gathered early in the spring or late in the fall, and should be carefully dried and kept in a close place for use.

*Medical properties and uses.*—The bloodroot is an active emetic and cathartic. It is narcotic and escarotic. It acts finely on the liver. It has been given in typhoid pneumonia, catarrh, whooping cough, croup, consumption, rheumatism, jaundice, and dropsy of the chest. It is given either as an emetic, cathartic, nauseant or alterative, and has been highly praised by many judicious practitioners. The dose, with a view to its emetic effect, is from *ten to twenty grains* for an adult; it is best to give it in pills, to prevent the great irritation which the powder produces in the throat when taken in that form. As a cathartic, it should be taken in less doses. It is used, in combination with precipitated carbonated iron, in consumption, in half grain doses, three times a day, with four or five grains of the iron combined. For jaundice, it may be given in two or three grain pills, three or four times a day; and so in rheumatism. The powder effectually removes proud flesh from old sores, and cleanses them. If the medicine be given in too large doses, it produces vertigo and great prostration. It is an effectual remedy for the yellow water in horses. Three or four ounces of the root fresh may be bruised, and a pint of water added, and the juice all squeezed out for a drench. One or two doses will cure. It purges the horse freely. The tincture is often used, and is officinal. Two ounces of the root to a quart of spirit makes the tincture. Half an ounce of the tincture is a dose for an adult, and a diminished quantity, according to age, for children.

**BLUE FLAG.** *Iris Versicolor.* (The root.)

See page 928, for Engraving.

This indigenous species of iris has a perennial, fleshy, horizontal, fibrous root, and a stem two or three feet high, rough on one side, acute on the other, and frequently branching. The leaves are sheathing at the base, sword-shaped, and striated. The flowers are from two to six in number, and are usually blue or purple, though varying much in color. The capsule has three valves, is divided into three cells, and when mature is oblong three-sided, with obtuse angles, and contains numerous flat seeds. The blue flag is found in all parts of the United States, flourishing in low grounds and wet places, in meadows, and on the borders of swamps, which it serves to adorn with its large and beautiful flowers, that make their appearance in June. The root contains the medical properties. The flowers afford a fine blue infusion, which serves as a test for acids and alkalies. The recent root is without odor, and has a nauseous and extreme acrid taste, which is imparted to water by decoction, and still more perfectly to alcohol. The acrimony, as well as the medicinal activity, is impaired by age.

*Medical properties and uses.* — The blue flag possesses emetic, cathartic, and diuretic properties, which are common to most of the species of this genus. Bartram and Bigelow found it efficacious as a purgative, though acrid and distressing in its operation. *Dr. McBride*, of Carolina, found it useful in dropsy. It may be given in substance, decoction, or tincture. The dose of the dried root is from ten to twenty grains, or the same amount made into decoction; half an ounce of the tincture is a dose. It may be repeated from four to six times in twenty-four hours.

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**AMERICAN SENNA.** *Cassia Marilandica.*

This is an indigenous, vigorous, perennial plant, sending up annually numerous round, erect, nearly smooth stems, which are usually simple, and rise from three to six feet in height. The leaves are alternate, and composed of from eight to ten pairs of oblong, lanceolate, smooth leaflets, green on the upper surface, pale beneath, and connected by short petioles to the footstalk. The flowers are a beautiful golden yellow color, and grow in short axillary racemes at the upper part of the stem; the petals are fine, three ascending, and two descending, and larger than

the others. The fruit is a flat pod, from two to four inches long somewhat hairy, and of a brownish color. It grows plentifully in all parts of the United States. It flourishes best in a low, moist, rich soil, in the vicinity of water, near rivers and ponds, though it has been found on high, dry ground. It is sometimes cultivated in gardens, for medical use, in the north. It blooms in July and August, and presents a beautiful appearance. The leaves should be collected in August or the beginning of September, and carefully dried.

*Medical properties and uses.*—The American senna is not equal to the European; it should be given in about one third larger doses, it not being so strong. It should be taken with manna in decoction, or the tea may be sweetened. A pint of strong tea, made of an ounce of the leaves, operates freely; it should be sweetened, and some ginger or caraway seeds put in with the leaves or tea, to prevent griping. Its only property is purgative.

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#### WORMSEED. *Chenipodium.*

This is an indigenous, perennial plant, with an herbaceous, erect, branching, furrowed stem, which rises from two to five or six feet in height. The leaves are alternate or sessile, oblong, lanceolate, attenuated at both ends, sinuated and toothed on the margin, conspicuously veined, of a yellowish-green color, and dotted on their under surface. The flowers are very numerous, small, of the same color of the leaves, and arranged in long, leafless, terminal panicles, which are composed of slender, dense, glomerate, alternating spikes. It is commonly known by the name Jerusalem oak. It grows in almost all parts of the United States, but most luxuriantly in the south. It is usually found about old walls, rubbish, and fence-corners, in rich places, or about old farm-houses, and in the alleys and narrow lanes of cities. It flowers from July to September, and ripens its seeds successively through the autumn. The whole herb has a strong, peculiar smell, somewhat offensive, and yet aromatic, which it retains when dried.

*Medical properties and uses.*—Wormseed is one of our best anthelmintics. The oil of wormseed is made of the seeds of this plant. It is given in doses of one drop for each year, if the child is old; a dose given morning and evening, on sugar, for four or five days; then a dose of castor-oil is given to carry off the worms.



Or the seeds may be ground or bruised, and given in sugar. The dose for a child one year old is one scruple, and one for every additional year. The leaves and seeds are sometimes boiled in milk, and sweetened and given; or a table spoonful of the fresh juice may be given, well sweetened, as above, for four or five days, then followed with castor-oil. It is an excellent remedy for worms.

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#### WILD POTATO. *Convolvulus Panduratus.*

The wild potato has a perennial root, and a round, purplish, procumbent or clinging stem, which twines around neighboring objects, and grows sometimes twelve feet in length. The leaves, which stand alternately on long petioles, are broad, heart-shaped at the base, entire, or lobed on the sides like a guitar or violin, somewhat acuminate, deep green on the upper surface, and paler beneath. The flowers are trumpet-shaped, or like the morning glory, white at the border, but purplish-red at the base. It grows throughout the United States, in sandy fields and along fences. It flowers from June to August. A variety with double flowers is cultivated in gardens for the sake of ornament. The root is the active part of the plant. It is very large, two or three feet in length, about three inches thick, branched at the bottom, externally of a brownish-yellow color and full of longitudinal fissures, internally whitish and milky, and of a somewhat acrid taste.

*Medical properties and uses.*—The wild potato is cathartic, and has been proposed as a substitute for jalap. It is also diuretic and is good in cases of gravel, or difficulty in making water.

*Dose.*—Forty grains of the dried root operate gently. But it is generally given in decoction; an ounce of the root, boiled in a gill of water ten minutes, for a dose. Or the better preparation is the juice, collected and dried, ten or fifteen grains of which is a dose. The top of the root should be cut off in the summer, and the milky juice collected and dried for use. It resembles the scammony, and is nearly equal to the imported article when properly prepared, but more diuretic and lithontriptic.

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#### HAIR-OIL.

Castor-Oil, two ounces.  
Oil of Neroli, one drachm.

Mix, and grease the hair occasionally. This is an excellent hair-oil, and has a fine flavor.

AMERICAN DITTANY. *Cunila Mariana*.

The dittany is a small, indigenous, perennial herb, from one to two feet high, growing on dry, shady hills, in a great portion of the United States, and flowering in June and July. The whole herb has a warm, pungent taste, and a fragrant odor, dependent on an essential oil, which may be obtained by distillation with water.

*Medical properties and uses.* — The dittany is gently stimulating and aromatic, somewhat analogous to the mints, penny-royal, &c. In warm infusion, it is actively sudorific; it is used to cure bad colds, and it excites perspiration in slight fevers. It promotes menstruation, especially when the periods are painful, — taken in the form of warm tea, so as to procure a free perspiration, and keep it up for some hours. It relieves flatulent colic and griping pain in the bowels. It is good to relieve pleurisy, by producing a copious sweating, or to relieve local pain in the joints or bones.

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LIVERWORT. *Hepatica Triloba*.

Botanists generally admit of but one species of liverwort, the *hepatica triloba*, and consider as accidental the differences of structure and color observed in the plant. But there are evidently two species, — one with the leaves oval, and of a pale-green color; the other is also trilobed, or three-lobed, but the leaves are more pointed, though not acute. The color is a deep purple on the top, and less so below; the stem is hairy, and the under part of the leaf is covered with a white, hairy furze. The leaf of the genuine plant is very thick and mucilaginous. Both species have a perennial, fibrous root. The leaves are supported upon hairy footstalks, and grow in bunches, from four to eight inches high. The flowers are single, growing on a separate stalk springing up from the root; they are purplish white. The genuine article has but three lobes in the leaf. Both species are indigenous, growing in the woods, and on the sides of hills and mountains. It flowers early in the spring. The winter does not kill the leaves. The genuine plant is greedily devoured by sheep, cattle, deer, &c., while the spurious is rarely eaten by them. The plant has almost fallen into disuse, in consequence of the spurious article having been used instead of the genuine.

the latter being rarely found where animals that chew the cud can destroy it.

*Medical properties and uses.* — The genuine liverwort is an excellent remedy in chronic diseases of the liver, consumption, or bad coughs from scrofulous affections of the lungs. It should be taken freely in the form of decoction, sweetened. The leaf of the genuine plant is twice as large as that of the spurious. Great care should be taken in the selection of the article, as the spurious is of no use at all. Experience and much observation have led me to the above conclusions.

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### BALDNESS. *Alopecia.*

*Dr Lardner* speaks highly of the following preparation for the restoration of the hair.

*Recipe:* Leaves of the Cherry Laurel, sixty grains.  
Cloves, pulverized fine, eight grains.  
Tincture of Lavender, two drachms.

Mix them all together; shake the bottle once a day for fourteen days; then filter through paper, and add fifteen drops of sulphuric acid. The bottle should be kept stopped with a glass ground stopper, so that no air can enter or escape. The bald parts are to be rubbed daily with this medicine. The effect will be perceived in six or seven applications.

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### ESSENCE OF CAMPHOR.

Tincture of Myrrh, half an ounce.  
Spirits Camphor, one and a half ounces.  
Pure Alcohol, four ounces.

Mix. Filter it through animal charcoal, which is ivory black, or coal made of burnt bones. This is a beautiful, clear essence, and will mix with water without separating the camphor. It is an excellent tooth-wash in salivation; a tea spoonful to half a tea cupful of warm water. Sixty drops make a pint of ordinary camphor julep. It should be sweetened with loaf sugar. A new preparation.



YELLOW ROOT—ORANGE ROOT. *Hydrastis Canadensis*.

This is an indigenous plant, growing in different parts of the United States. It flourishes best in rich, shady woods. It has a perennial root, and an herbaceous stem, from six inches to a foot high, with two unequal leaves, and a single terminal whitish or rose-colored flower. The root consists of a tortuous caudex and numerous long fibres, and is of a bright yellow color. It is juicy in the recent state, and loses much of its weight when dried. It has a strong, somewhat aromatic odor, and an exceedingly bitter taste.

*Medical properties and uses.* — The root should be gathered in the fall, when the seeds are ripe, which are in a red cluster between the two leaves. The root is tonic and astringent. The dose, as a tonic, of the powdered root, is twenty or thirty grains, taken in sirup or sugar, three or four times a day. It makes an excellent eye-water, infused in hot water, for chronic sore eyes, especially for the eyelids. It is also, in an infusion, a good mouth-wash for sore mouths of almost any description. It makes a good injection in gonorrhœa, or gleet, after the inflammation has subsided; also an excellent wash for old sores; and has been used, with some success, in the cure of cancer, in the form of a concentrated extract. It makes an excellent yellow dye for leather.

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### COSMETIC TO REMOVE PIMPLES FROM THE FACE.

Oil of Sweet Almonds, one ounce.  
Fluid Potassæ, one drachm.

Shake well together, and then add,

Rose Water, one ounce.  
Pure Water, six ounces.

Mix properly. This is to be used at night, and the following morning every trace of it is to be washed off with soap and warm water. If the skin should be tender after this treatment, the face should be bathed with the following:

Spirits Wine, two ounces.  
Rose Water, two ounces.  
Pure Water, twelve ounces.

Mix, and keep well corked, except while using. A few applications will cure.

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### ANOTHER COSMETIC.

Corrosive Sublimate, two grains.  
Almond Mixture, half a pint.

Mix. This is to be applied after washing, every morning, to remove yellow spots. Or the following may be used:

Essence of Camphor,

applied to them after washing every time, till they are removed.



GENTIAN. *Gentiana.*

There are four or five different species of gentian, all possessing similar qualities and properties. But the yellow gentian is among the most remarkable of the species which compose this genus, both for its beauty and great comparative size. From its thick, long, branching, perennial root, an erect, round stem rises to the height of three or four feet, bearing opposite, sessile, oval, acute, five-nerved leaves, of a bright-green color, and somewhat glaucous. The lower leaves, which spring from the root, are narrowed at their base into the form of a petiole. The flowers are large and beautiful, of a yellow color, peduncled and placed in whorls at the axils of the upper leaves. The calyx is a membranous, deciduous spathe; the corolla is roseate, and deeply

divided into five lanceolate, acute segments. This plant grows in the Apennines, the Alps, the Pyrenees, and in other mountainous or elevated regions of Europe, and abundantly in several of the Western States of this country. The root is the only part used in medicine. As found in our shops, it is in pieces of various dimensions and shapes, usually of considerable length, consisting sometimes of longitudinal slices, sometimes of the root cut transversely, twisted, wrinkled externally, of a greyish-brown color on the outside, yellowish or reddish within, and of a soft, spongy texture. The odor is feeble, but decided and peculiar. The taste is slightly sweetish, and intensely bitter, without being nauseous. Water and alcohol extract the taste and medical virtues of the root.

*Medical properties and uses.*—Gentian possesses, in a high degree, the tonic properties which characterize the simple bitters. It excites the appetite, invigorates the powers of digestion, and moderately increases the temperature of the body and the force of the circulation. In very large doses, however, it loads and oppresses the stomach, irritates the bowels, and even produces nausea and vomiting. It has been known as a medicine from the highest antiquity, and is said to have derived its name from *Gentius*, one of the kings of Illyria. It may be used in all cases of disease depending upon pure debility of the digestive organs, or requiring a general tonic impression, as dyspepsia, gout, difficult menstruation, hysteria, scrofula, intermittent fever, diarrhœa, and worms. It is not the name of the disease, but the condition of the stomach and bowels, that must be taken into consideration in its use. The powder has been applied externally to ill-conditioned ulcers. It is usually given in the form of infusion or tincture. The dose in infusion is a wine-glassful three or four times a day. It is made by infusing half an ounce of the powdered root in a pint of water. A tea spoonful of the tincture may be given as often, in a little water. The powdered root is given in ten or twenty grain doses, in sugar and water, three times a day.

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## AN OINTMENT TO REMOVE PIMPLES FROM THE FACE.

Beef's Marrow, one ounce.  
Calomel, thirty grains..

Mix them thoroughly, and touch the pimples, after squeezing out the hard lymph.

DANDELION. *Leontodon Taraxacum.*

The dandelion is an herbaceous plant, with a perennial, fusiform root. The leaves, which spring immediately from the root, are long, pinnatifid, generally runcinate, with the divisions toothed, smooth, and of a fine green color. The common name of the plant was derived from the fancied resemblance of its leaves to the teeth of a lion. The flower-stem rises from the midst of the leaves, six inches or more in height. It is erect, simple, naked, smooth, hollow, fragile, and terminated by a large golden-colored flower, which closes in the evening, and expands with the returning light of the sun. The calyx is smooth and double, with the outer scales bent downwards. The florets are very numerous, ligulate and toothed at their extremities. The receptacle is convex and punctured. The seed-down is stipitate, and at the period of maturity is disposed in a spherical form, and is so light and downy as to be easily blown away by the wind, with the seeds attached. The dandelion grows plentifully in most parts of the globe. All parts of the plant contain a milky, bitterish juice, which exudes when they are broken or wounded. It abounds in meadows and grass-plats, and in damp places; flowers early in the spring, and continues to send up flowers throughout the summer in different locations. The leaves make

an excellent and wholesome salad in the spring, if boiled with meat; they act gently on the bowels, and have a fine effect on the secretions of the liver.

The root is the medical part of the plant. It should be taken up in the fall and carefully dried, without washing, and kept close for use in the winter. But the fresh root is the best for all purposes, or the extract made from it.

*Medical properties and uses.*—The taraxacum is slightly tonic, diuretic, and aperient; and is thought to have a specific action on the liver, exciting it to secretion, and resolving its chronic engorgements. It has been much employed in Germany and the United States, and is certainly a valuable remedy in chronic diseases of the liver, and the digestive organs generally. It is also a good remedy in diseases of the spleen. It is beneficial in consumption; and as a general alterative, when combined with sarsaparilla, in chronic or pseudo-syphilis; and it is invaluable in scrofula. Two ounces of the fresh root, or one ounce of the dried, previously bruised or sliced, may be boiled in a pint of water down to half a pint, and two fluid ounces of this decoction may be taken two or three times a day. But this I have found to be too large a dose; half the quantity of the root, prepared as above, and half the quantity taken, is better—more likely to sit easy on the stomach. As a general alterative, I have used the following: one drachm of the dried root, pulverized, and as much sarsaparilla, put into a pitcher, and a pint of boiling water poured on it at night, to be drank at pleasure the next day, so that all is taken by bedtime. This, repeated for a month, produces a fine effect on the system, where the blood needs purifying, in cases of pseudo-syphilis, or chronic affections of the liver.

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#### MAY-APPLE. *Podophyllum.*

The may-apple or mandrake is an indigenous plant, and the only species belonging to the genus. It grows plentifully in all parts of the United States, and is too well known to need description. The fruit is nutritive, the leaves poisonous, and the root medicinal. The root should be taken up in the spring, or fall, and carefully dried in the sun.

*Medical properties and uses.*—The powdered root is an active and certain cathartic, producing copious liquid discharges, without much pain, griping, or other unpleasant effects. In large doses, it sometimes produces vomiting; but the same result

is sometimes produced by any active medicine. Its operation resembles that of jalap: it is not quite so quick in its action, but is thought by some to be more drastic. It is applicable to most inflammatory diseases, which require brisk purging, and may very safely be combined with calomel in bilious fevers and hepatic congestions. It is frequently used in combination with cream of tartar in dropsy, rheumatism, and scrofulous affections. The dose of the powdered root is from twenty to thirty grains. An extract may be prepared from the root, possessing all its virtues in smaller doses. In small doses, frequently repeated, it is said to diminish the frequency of the pulse, and to relieve cough; and for these effects it is sometimes used in coughs, catarrhs, spitting of blood, and other pulmonary affections. This is an officinal remedy of the United States pharmacopœia.

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#### BITTER POLYGALA. *Polygala Rubella.*

The polygala rubella is an officinal remedy of the United States pharmacopœia. This species of polygala is an indigenous, perennial plant, with a branching, somewhat fusiform root, which sends up annually numerous simple, smooth, and angular stems, from four to eight inches in height. The leaves are scattered, sessile, obovate or linear, lanceolate, attenuated towards the base, obtuse, and mucronate. The flowers are purple, and in elongated terminal racemes. From the base of the stem proceed other racemes, which lie upon the ground, or are partially buried under it, and bear incomplete but fertile flowers, the calyx of which is without wings. This plant is found in many parts of the United States, preferring a dry, gravelly, or sandy soil, and flowering in June and July. The whole plant is officinal. It has a strong and permanently bitter taste, which it yields to water and alcohol.

*Medical properties and uses.* — In small doses, it is tonic; in larger, it is laxative and diaphoretic. The infusion of the dried plant is used to give tone to the digestive organs, and is beneficial in indigestion and some forms of dyspepsia.

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#### SUMACH. *Rhus Glabrum.*

This is the common sumach of our country, and grows plentifully in many parts of the United States. It is so well known



that it does not need description. The berries are the medicinal part; a strong tea made of them, being acid and cooling, is highly esteemed as a drink in fevers. But it is principally introduced here on the recommendation of *Dr. Fahnestock*. An infusion of the inner bark of the root, employed as a gargle, he considers almost a specific in bad mercurial sore mouth; which constitutes it a valuable article of the *Materia Medica*.

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### DEWBERRY, OR BLACKBERRY. *Rubus Trivialis*.

The fruit and root are both medicinal. The blackberry is a common bramble, growing abundantly in every part of the United States.

*Medical properties and uses.*—Both the dewberry and blackberry roots are tonic and astringent. They have long been a favorite domestic remedy in bowel affections, and, from popular favor, have passed into regular medical use. Given in the form of decoction, they are acceptable to the stomach, and not offensive to the taste; and may be employed with great advantage in cases of diarrhœa, after the stomach is cleansed, either in children or adults. Their use is admissible in all cases where vegetable astringents are proper. The decoction may be prepared by boiling an ounce of the smaller roots, or of the bark of the larger, in a pint and a half of water, down to one pint. A small wine-glassful may be taken frequently in the day. A cordial made of the ripe fruit is also good for children in the above diseases. It may be taken, in dessert spoonful doses, three or four times a day.

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### SIRUP OF GREEN PERSIMMONS.

Green Persimmons, fully grown, one pound.

Bruise them well; add water, half a gallon. Boil slowly for thirty minutes, and, when cool, strain through flannel. Then add one pound of white sugar, and boil down slowly to a thick sirup. From fifteen to thirty drops is a dose for an infant from six months to a year old. It is given in diarrhœa, after the stomach is cleansed. The dose should be repeated every time the child purges, till the stools are not more frequent than they should be in the twenty-four hours. It is safe and valuable.

BLACK ALDER. *Prinos.*

The black alder grows in all parts of the United States, from Canada to Florida, and is found most frequently in low, wet places, such as swamps, ponds, ditches, and on streams. The flowers are small, white, nearly sessile, and grow three or four together at the axils of the leaves. The fruit, when ripe, consists of glossy, scarlet, roundish berries, about the size of a pea, containing six seeds in separate cells. Several of these berries are clustered together on different parts of the limbs. They still remain on the stem after the leaves have fallen, giving the

shrub a striking and beautiful appearance; hence it is called by some, winter-berry.

*Medical properties and uses.*—The berries have a bitterish and somewhat acrid taste, and are sometimes used medicinally, in place of the bark; but the bark is the proper medicinal part of the shrub. It is tonic and astringent, and was once thought to be a substitute for the Peruvian bark; but this was a mistake. Its medical properties are best adapted to the cure of flabby, ill-conditioned ulcers, and mortification, in which a strong decoction is freely used with great benefit. In these cases it should be given internally, in the form of a strong decoction, several times a day, as well as applied as a wash and poultice to the parts. A saturated tincture, both of the bark and berries, is used internally for similar purposes. The dose of the powdered bark is from sixty to one hundred grains, taken in any convenient vehicle, three or four times a day.

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#### POPPY CAPSULES. *Papaver.*

The poppy of the United States is quite small when compared with that of Turkey. It is a well-known plant, of many varieties, cultivated in gardens, mostly for the beauty of its flowers. The head or bulb and the flowering stem afford the opium of commerce. But we only notice it here, in order to give the use of the bulbs or flow-balls as a medicine of external use. A poultice made of these bulbs and applied to a painful part, gives much relief from pain. A tea made of them, and sweetened, is sometimes taken internally for the same purpose; but it should be used cautiously, lest a fatal dose be taken, as it contains an uncertain amount of opium.

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#### BLACK PEPPER. *Piper.*

Black pepper, as it is found in our country in stores and shops, is so well known that it needs no description; but the manner in which it grows and is gathered for use is not so well known. It grows on a vine, and is perennial, with a round smooth, woody, articulated stem, swelling near the joints, branching, and from eight to twelve feet, or more, in length. The leaves are entire, broad, ovate, acuminate, seven-nerved, coriaceous, very smooth, of a dark-green color, and attached by

strong, sheath-like footstalks to the joints of the branches. The flowers are small and whitish, covering thickly a cylindrical spadix, and succeeded by globular berries, which are of a red color when ripe.

The vine grows wild in Cochin-China, and in various parts of India. It is cultivated on the coasts of Malabar, in the peninsula of Malacca, in Siam, Sumatra, Java, Borneo, the Philippines, and many other places in the East. We are told by Crawford, that the best pepper is raised in Malabar; but Europe and America derive their chief supplies from Sumatra and Java.

The vine is propagated by cuttings, and is supported by props, or by trees of various kinds, planted for the purpose, upon which it is trailed. In three or four years from the time of planting, it begins to bear fruit. The berries are gathered before they are perfectly ripe, and, upon being dried, become black and wrinkled. White pepper is the ripe berry deprived of its skin, by maceration in water and subsequent friction, and afterwards dried in the sun. It has less of the peculiar virtues of the spice than the black pepper, and is seldom employed in this country. There is a variety of peppers of the Cayenne genus, but they all possess about the same medical properties; as, the long pepper, the common red pepper, the yellow, the round, and the flat.

*Medical properties and uses.* — Pepper is a warm carminative stimulant, capable of producing general arterial excitement, but acting with greater proportional energy on the part to which it is applied. From the time of Hippocrates it has been employed as a condiment and medicine. Its chief medical application is to excite the languid stomach and correct flatulence. It has been used in the cure of intermittents. The best form for this purpose is that of its oil, or piperine, either of which, when combined with quinine or salicine, becomes an excellent assistant in the cure of intermittents. The dose of pepper, in substance, is from five to twenty grains; the dose of the oil is from half a drop to a drop, suitably combined with other articles; and the dose of the salt, or piperine, is from one fifth to half a grain, suitably combined with calomel or quinine, as the case may be. In extraordinary cases, as in *cholera*, it is sometimes given in doses of from three to six grains, repeated every half hour or hour. But it is most frequently used as an external rubefacient, when the skin is cold, or to relieve pain from debility proceeding from excessive torpor of the part.

## OPIUM.

Opium is the concrete juice of the poppy-head. The head and the flower-stalk are punctured, and a milky juice exudes, which dries, and is scraped off and rolled up in the leaves of the plant, and shipped to various parts of the world as an article of commerce.

“Opium is produced in different parts of the world, as Turkey, Smyrna, Egypt, India, Persia.” *Morphia* is made of opium. Laudanum is the tincture of opium. The black drop is a preparation of opium, and almost all the narcotics have opium, in some form or other, combined with them. Opium enters into many of the preparations of officinal medicine. It is one of the most valuable medicines of the *Materia Medica*, and is the great soother of human pain and suffering.

Opium, in a solid form, is given in doses of from half a grain to one or two grains; in a liquid form, the number of drops depends upon the strength of the liquid. Morphine is four times as strong as the solid opium; the black drop is four times as strong as common laudanum.

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 RHUBARB. *Rheum Palmatum.*

There is a variety of the species rhubarb. The various species are named as follows: *R. Palmatum*, *R. Undulatum*, *R. Compactum*, *R. Australe*, *R. Rhapanticum*, *R. Indicum*, *R. Rassicum*, and *R. Britannicum*. These various species of rhubarb vary a little in the shape, and somewhat in the color of the internal appearance of the root; they are, however, all more or less medicinal, although the Turkey rhubarb is the best for all medical purposes. Rhubarb is a gentle and valuable purgative, in doses of from twenty to thirty grains for an adult. The best rhubarb is of a bright-yellow color when dried and pulverized. The Turkey rhubarb, which we find in our shops in the natural state, is in roots nearly round, with a cord passing through it by which it has been suspended and dried. The root varies from the size of an egg to that of a child's or boy's fist. It is yellow without, and yellowish-grey inside; the roots are pretty hard and rather tough. Rhubarb is a safe and valuable medicine, especially for children, either in substance, or in the form of sirup. (See *Sirup of Rhubarb*.) The dose for an adult is from



twenty to thirty grains. It is, however, generally combined with other purgative medicines.

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### LACTUCA. *Lactucarium.*

Lactucarium is the milky juice of the lettuce. When the plant is fully grown, it affords a large amount of this juice, which, when dried, is preserved like opium for use; but it is mostly found in the shops in a softer state than opium.

*Medical properties and uses.*—It is similar to opium in its effects upon the human system, though much more feeble. It may be given in doses of from two to four grains, to relieve pain. It does not affect the head or stomach like opium, and is therefore more convenient in many cases, and in many constitutions. It is the milky juice which the lettuce contains that produces drowsiness in those who eat it in a raw state. It should be seasoned with the essence of bacon, or some other gravy, before eaten, which destroys in a great measure the soporific effects of the salad.

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### LAVENDER. *Lavendula.* (The essence and oil.)

Lavender is a shrub, of which there are two species, one producing broad and the other narrow leaves. The shrub or bush grows from three to six feet high. Its flowers are of a bluish color, and distributed in whorls around the branches. It grows abundantly in the south of Europe, Spain, Italy and France, and is generally found in barren, sandy lands. It is cultivated abundantly in our gardens, in America. The flowers and all parts of the plant contain an oil which is medicinal. Spirits are also distilled from the plant and flowers.

*Medical properties and uses.*—Lavender is an aromatic stimulant and tonic, esteemed useful in many cases of nervous debility, but is not used except in the form of oil, or spirits, or essence. The different products obtained by distillation are much used in perfumery, and as grateful additions to other medicines, which they render at the same time more acceptable to the palate and stomach it being a grateful cordial to most stomachs.

ICELAND MOSS. *Lichen Islandicus.*

The Iceland moss is foliaceous, erect, from two to four inches high, with a dry-looking leaf, smooth and shining, the lobes of which are irregularly subdivided, channeled, and fringed at their edges with rigid hairs. Those divisions upon which the fruit is produced are dilated. The color is olive-brown or greenish-grey above, reddish at the base, and lighter on the under than the upper surface. The fruit is in flat, shield-like, reddish-brown receptacles, with elevated entire edges, placed on the surface of the frond, near its border.

The plant is found in the northern latitudes of the old and new continents, and on the elevated mountains further north. It receives its name from the abundance in which it prevails in Iceland. It is also abundant in the mountains, and on the sandy plains in New England. The dried moss is of a diversified color, greyish-white, brown, and red, in its different parts, with less of the green tint than in its original state. It is inodorous, and has a bitter, mucilaginous taste. Macerated in water, it absorbs rather more than its own weight of the fluid, and, if the water be warm, renders it bitter. Boiling water extracts all of its soluble properties. The decoction thickens upon cooling, and acquires a gelatinous consistence, resembling starch in appearance, but without its viscosity. The gum and starch contained in the moss render it sufficiently nutritive to serve as food for the inhabitants of Iceland and Lapland. They powder it, and make it into bread, or boil it in milk, having first partially separated the bitter principle by hot water.

*Medical properties and uses.* — It is demulcent, nutritious and tonic, and therefore well calculated for affections of the mucous membrane of the lungs, stomach and bowels, in which the local disease is associated with a debilitated condition of the digestive organs, or of the system generally. Hence, it has been found useful in chronic catarrhs and other pulmonary affections, spitting of blood, &c., and all affections attended with a copious expectoration of a debilitating character, as also in dyspepsia, chronic dysentery, and diarrhœa. It is usually employed in the form of a decoction. An ounce of the leaves is boiled in a quart of water down to three gills, and strained while hot, — (it should be simmered slowly,) — then add to it a gill of strained honey, and simmer again, till all is well mixed. It may then be kept in a

bowl or pitcher. Two table spoonfuls of the mixture should be taken every two or three hours. Much has been said of this medicine in the cure of consumption. But its best remedial effects are seen in the cure of bad colds, protracted catarrhs, and dyspeptic coughs. It is certainly a valuable remedy in such cases, and may be resorted to with safety.

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### GAMBOGE. *Gamboge.*

The gamboge which is brought to the United States is mostly procured in Siam and Cochin-China, in Asia. It is said also to be produced in Ceylon. We import gamboge from Canton and Calcutta, whither it is taken by the natives and resident merchants. There is no difference in the character of the drug as brought to us from any of these places,—a proof that it is all procured from a similar tree. It is the juice of a shrub or tree, collected from the broken leaves or limbs, from which it exudes, drop by drop, and is collected; and when hardened in the sun, it is rolled up into sticks from four to six inches long, when it becomes very hard and brittle. It is yellow without and within. It has a peculiarly unpleasant taste. It is easily pulverized into a golden-yellow powder. It is much used as a paint, as well as a medicine.

*Medical properties and uses.*—Gamboge is a powerful drastic, hydrogogue cathartic, very apt to produce nausea and vomiting when given in the full dose. It may be used in the treatment of dropsy, combined with cream tartar, or with the alkalies. It is a good article in small quantities, combined with slow medicines, to increase their action, while at the same time they lessen its drastic action. It was once celebrated in the cure of tape-worm, but with how much justice I cannot say. The dose is from one to four grains. It should be used cautiously, and never should be given alone, but combined with some other medicine, and also some warm aromatics, such as ginger, pepper, or mace, &c. It should never be given to children.

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### MYRRH. *Myrrha.*

Gum myrrh is obtained from a small tree, with a stunted trunk, covered with a whitish-grey bark, and furnished with rough, abortive branches, terminating in spikes. The tree grows

in Arabia Felix. It has not been long since it was ascertained precisely how and from what myrrh was obtained. Two varieties of myrrh are distinguished in the market, — the India and the Turkey. The former is imported from the East Indies, and the latter from the Levant. It is said that the India myrrh is collected in Abyssinia, and thence taken to the ports of Hindostan; while that which goes under the name of Turkey myrrh is brought from Arabia, by the way of Egypt. Myrrh is in small irregular fragments; somewhat like tears, it exudes from the bark of the tree without a wound. The lighter the gum the better the article. When good, it is of a light yellowish or reddish color, and in small lumps adherent together. It is semi-transparent, of a bitter aromatic taste, and can be pretty easily pulverized. Myrrh is partially soluble in water, alcohol, and ether.

*Medical properties and uses.*—Myrrh is a stimulant tonic, with some expectorant and emmenagogue properties. It should never be given when there is any fever. In cases of chronic cough, when there is no fever, it will do good as an expectorant and gentle exciter of the lungs; and in difficult menstruation, combined with aloes, it is good. It makes a good mouth-wash in canker or sore mouth, or for indolent ulcers, or carious bones. In all cases where the parts require to be stimulated into more vigorous action, myrrh will be found to be a valuable remedy. The dose internally is from ten to twenty grains, and in tincture from thirty to forty drops.

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### JALAP. *Jalapa.*

The jalap plant is a native of Mexico, and derived its name from the city of Xalapa, in the state of Vera Cruz. This drug is brought from the port of Vera Cruz in bags containing usually between one and two hundred pounds.

*Medical properties and uses.*—Jalap is an active cathartic, operating briskly, and sometimes painfully, upon the bowels, and producing copious watery stools. The watery extract purges moderately, without much griping pain, and is said to increase the flow of urine. The portion not taken up by water gripes severely. The watery extract obtained from jalap previously exhausted by rectified spirits is said to have no cathartic effect, but to operate powerfully by urine. Jalap is applicable to most cases in which an active cathartic is required. It is especially

beneficial, combined with cream of tartar, in the treatment of dropsy of the abdomen. The same preparation is much employed in the hip disease, and scrofulous affections of other joints. With calomel, it forms a cathartic compound, which is highly esteemed in the treatment of the bilious fevers of the United States. The dose of jalap, in powder, is from fifteen to thirty grains; of the resin, or alcoholic extract, from four to eight grains. The extract is usually given rubbed up with sugar or mucilage. The watery extract is preferable to the alcoholic, as it more nearly resembles the jalap itself. The usual dose of calomel and jalap is fifteen grains of each; that of cream tartar and jalap, ten of jalap and thirty of the cream tartar, given in parsley tea for dropsy. It should be repeated every four or six hours, till its full effect is produced, and then continued till the water is all removed.

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#### WHITE WALNUT. *Juglans.*

The white walnut, or butternut tree, grows abundantly in many parts of the United States, and is so well known that it needs no description. The portion of this tree which is medicinal is the inner bark, which should be stripped off in June, and an extract made of it. If taken at any other season of the year the extract gripes. The bark is freed from its rough parts and cut fine, and boiled till the strength becomes an extract thick enough to roll into pills. It is kept in this state in the shops. After being kept for a year or two, it becomes dry enough to pulverize.

*Medical properties and uses.*—Butternut is a mild cathartic, operating without pain or irritation, and resembling rhubarb in the property of evacuating without debilitating the alimentary canal. It was much employed during the revolutionary war by *Dr. Rush* and other physicians attached to the army, and was highly esteemed. It is especially applicable to cases of habitual costiveness, and other weaknesses of the bowels, and has acquired considerable reputation in dysentery. It may be used, in combination with calomel, in the common fevers of the United States. It is always given in the form of decoction or extract,—the latter is preferable; it is never given in substance. The dose is from twenty to thirty grains as a purge, and from five to ten as a laxative. It is safe in any case where a mild laxative is required. Any farmer can make and use it. It does not lose its virtue by keeping, provided the water be entirely evaporated from the extract.



EPSOM SALTS. *Magnesia Sulphas.*

Epsom salts—sulphate of magnesia—is one of the constituents of sea-water, and of some saline springs. It was originally prepared by evaporating the waters of some saline springs at Epsom, in England, from which it derived its name. It also occurs native, either crystallized in long, slender, prismatic, adhering crystals, or as an efflorescence on certain rocks and soils, which contain magnesia and a sulphate or sulphuret. In the United States, it is found abundantly in the great caverns so numerous to the west of the Alleghany Mountains. In one of these caves, near Corydon, Indiana, it forms a stratum on the bottom several inches deep, and appears in masses sometimes weighing ten pounds, or it is disseminated in the earth of the cavern, one bushel of which yields from four to twenty-five pounds of this sulphate. It also appears on the walls of the cavern, and if it be removed, successive crystals again appear in a few weeks. It is found in various mineral waters all over the world, and is prepared by different chemical processes, according to the combinations with which it is found.

*Medical properties and uses.* — Sulphate of magnesia is a mild and safe cathartic, operating with little pain or nausea, and producing watery stools. It is more acceptable to the stomach than most medicines of its class, and will often be retained when others are rejected. It is a valuable combination with senna tea, preventing the senna from griping. It may be used in most fevers, after the secreting organs have been put into a good condition by other medicines. It is good to remove costiveness; but for this purpose it should be taken in small doses, and repeated. An ounce is a full dose, dissolved in water.

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ROCHELLE SALTS. *Soda et Potassæ Tartris.*

Rochelle salts is a combination of carbonate of soda and cream of tartar. When these two articles are chemically combined in proper proportions, the salt produced is in the form of white, transparent, slightly efflorescent crystals, often very large, and having the shape, when carefully prepared, of right prisms, with ten or twelve unequal sides. Its taste is saline, and slightly bitter. It dissolves in five times its weight of cold water, and much less of boiling water.

*Medical properties and uses.*—Rochelle salts is a mild, cooling purgative, well suited to delicate and irritable stomachs, being the least unpalatable of the neutral salts. As it is not incompatible with tartar emetic, it may be associated with it in solution. It is one of the ingredients in the effervescing aperient called Seidlitz powders, in the proportion of two of the Rochelle salts to one of tartaric acid. They are put up in separate papers, and dissolved in separate glasses, and then poured together, and while in a state of effervescence they are drunk. The dose of the salts is an ounce for an adult, and less for a child.

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### GLAUBER'S SALTS. *Soda Sulphas.*

Sulphate of soda, or Glauber's salts—which last name it has taken from Glauber, its first discoverer—exists in small quantities diffused in nature almost everywhere. It is also made by various chemical processes, which it is unnecessary to describe here.

*Medical properties and uses.*—Glauber's salts is an active cathartic, easily dissolved in water, and quite bitter. It is a good remedy in dropsy, when given largely diluted with water, or combined with cream of tartar, camphor and rhubarb. It is safe and agreeable, and acts freely on the kidneys. It should be often repeated.

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### SALTPETRE. *Potassæ Nitræs.*

Nitre, or saltpetre, is both a natural and an artificial production. It is found abundantly in the caves in the United States, where it is always mixed with the nitrate of lime, from which it requires to be purified by potassæ, which process is performed by the addition of wood ashes. It is found in this state abundantly in all the caves, or most of them, in limestone countries. In pharmacy, nitre is extensively used in the preparation of various articles of medicine. It is also an essential ingredient in the composition of gunpowder.

*Medical properties and uses.*—Nitre is considered refrigerent, diuretic, and diaphoretic, and is much used in inflammatory diseases. It is a powerful antiseptic. It generally promotes the secretion of urine, and sweats; lessens the heat of the body and the frequency of the pulse, and has a tendency to keep the

bowels in a soluble condition. It is frequently combined with tartar emetic and cream of tartar, as a febrifuge, and is valuable in this form. It is also given largely by some physicians in rheumatism and sciatica; also in dropsy; which diseases see. It is frequently given in bleeding from the lungs, nose, &c., and is useful in gargles for sore throat. The dose is from five to twenty grains, according to the ease and condition of the patient. It is given in solution, or in sirup, and may be repeated frequently if the ease should require it. In large doses, however, it sometimes nauseates, and occasionally vomits the patient.

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### CREAM TARTAR. *Potassæ Supertartras.*

The cream of tartar is obtained from crude tartar by a chemical process, and is a supertartrate of potash. It is a beautiful clear white powder when pure.

*Medical properties and uses.* — Cream of tartar is a pleasant, cooling cathartic; it is acid, and therefore refrigerent. It is diuretic and sudorific. In large doses, it is hydrogogue, that is, it carries off water in cases of dropsy, producing copious watery stools. In combination with saltpetre and gum camphor, it becomes an excellent remedy for the cure of dropsy. It is also much used in fevers as a febrifuge, in small doses, combined with nitre and tartar emetic. It is one of the ingredients in the compound powder of jalap, in the proportions of three to one of the jalap. Cream of tartar whey is made by adding two drachms of the tartar to a pint of boiling milk. The whey, a little sweetened, is grateful in fevers and in dropsical affections.

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### PERSIMMON. *Diospyros Virginiana.*

The persimmon is an indigenous tree, growing plentifully in the Middle and Southern States, and is too well known to need description.

*Medical properties and uses.* — The bark and green fruit are both medicinal. A sirup made of the green fruit is an excellent remedy in debilitated and relaxed conditions of the bowels, as in the watery purging of children in summer complaint. The bark is also an excellent remedy for the same form of disease, when properly prepared and given. (See formularies for sirups. See Sirup of Diospyros, both of the bark and fruit.)

SENECA SNAKEROOT. *Polygala Senega.*

The Seneca snakeroot has attracted so general an attention from the medical public as to become an article of exportation to Europe, and one which holds a regular place in the druggist stores. It grows in most latitudes of the United States, especially in the mountainous tracts. It has erect, smooth, simple stems, with alternate, lanceolate leaves, broadest at the base, and flowers slightly crested. The root is firm, hard, branching, and perennial, consisting of a moderately solid wood, and thick bark. This root sends up a number of annual stems, which are simple,

smooth, and occasionally tinged with red. The leaves are scattered, nearly or quite sessile, lanceolate, with a subacute point, smooth, paler underneath; flowers white, in a close, terminal spike. The fruit ripens on the lower part of the spike, while on the top the flowers are yet appearing. The root has a somewhat unpleasant and acid taste. After chewing, it leaves an acrid taste in the mouth, and still more in the fauces after it is swallowed. It communicates all these properties to water by boiling.

*Medical properties and uses.* — It is sudorific and expectorant in small doses, and emetic and cathartic in large doses. The usual way of using the root is by a decoction, which may be made of suitable strength by boiling an ounce of the root in a pint and a half of water till it is reduced to a pint. This preparation may be given in doses of a table spoonful or upwards, without disturbing the stomach, and may be repeated every hour. It is an excellent remedy in pneumonia after the inflammation has subsided. It has given relief in asthma, in old people, but in young people it is too irritating. But when asthma assumes the form of peripneumonia notha, in the winter and spring, then the Seneca is a valuable remedy. It has obtained great reputation in croup. It should first be given in doses sufficient to puke, and then in smaller doses, to promote expectoration, especially if bleeding be premised before it is given as an emetic. It should be given in table spoonful doses of the tea every half hour, or oftener, till the emetic effect is produced; and the dose should then be lessened, and the time protracted.

It has been used by *Drs. Percival, Willman*, and others, in dropsy. In this disease, it should be given in such doses as the stomach will bear without puking, so that its cathartic and diuretic effects may be fully obtained. It requires perseverance to effect a cure. In chronic rheumatism, it has been of service by its universal stimulant and diuretic effects. If, however, an ounce of the root be boiled in a pint of water to a strong tea, and all be taken at once, a violent puking, purging, and diuresis occurs, and the disease has been known to yield to one dose: but this is a desperate dose, and should not be ventured upon by a person much debilitated. It is better to take a wine-glassful three times a day, till the water is evacuated. In uterine complaints, especially in painful menstruation, the Seneca is a good remedy. Begin one day before the return of the catamenia, and take it in such portions as the stomach will bear, every two hours, till the flow commences. The most common method of



giving the Seneca is in decoction, — an ounce of the root in a pint of water, — and give a small wine-glassful every one, two, or three hours. The root has been given in substance, in doses of from twenty to thirty grains, repeated as above.



INDIAN TURNIP. *Arum Triphyllum*.

This plant is so versatile in its constitution, that it bears the climate of Canada and that of Brazil. It therefore is common to both North and South America. In its structure it is one of our most singular vegetables, and in its color the most variable. It grows in swamps, and in rich land in shady woods; and is universally known by the name of *dragon-root*, and *Indian turnip*. The stalk is straight, with two or three leaves; the flower-stem rises by the stalk, and sometimes springs out from it. The color of the flower varies from an ashy white to a beautiful purple. The seed grows in a cone from the flower-stalk. The root is nearly round, and flat on the bottom, with a number of small roots springing out around the top of the bulb. The under part of the root is covered with a dark, wrinkled

skin. Every part of the plant is acrid, but the root most so, it is almost caustic.

*Medical properties and uses.*—The Indian turnip, when partially dried and grated, and mixed in small portions in honey, is good in the coughs of old persons when there is no fever. It also enters into many of the cough sirups; but when boiled for that purpose, its medical properties are lost. It should always be given in substance, let the dose be large or small. It is most active when green. When perfectly dry, and kept for a year or two, it is of but little use.

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### A CURE FOR CORNS.

A large majority of the human family are troubled with corns, —a disease almost always occasioned by tight or strait shoes. Every method of extracting corns seems only to afford temporary relief, and will ever be so till more attention is paid to the shoes. Great care should be used, in cutting corns, that the nerves are not wounded. The feet should be bathed frequently in warm salt and water, and some potash dissolved in it; and the following plaster should be worn on the corn:

*Recipe:* Gum Galbanum,  
Saffron Root,  
Gum Camphor, — of each equal parts.

Let all be made fine, and a plaster formed. Wear this day and night, till the corns are removed. The same remedy will cure bunions, only it must be continued longer. The shoes must be made to fit loosely, and of soft upper leather.

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### COMPOUND SPIRITS LAVENDER.

Spirits Wine, half gallon.  
Oil of Lavender, three drachms.  
Oil of Rosemary, one drachm.  
Cinnamon Bark, pulverized, one ounce.  
Cloves, pulverized, two drachms.  
Nutmegs, pulverized, half an ounce.  
Red Sanders, three drachms.

Mix all together, and digest fourteen days. Shake the bottle occasionally; then filter through paper, and stop close for use.

This is a pleasant cordial, and may be taken, in tea spoonful doses, for colic or weakness at the stomach, faintness, sickness at the stomach, &c

AMERICAN CENTAURY. *Sabbatia Angularis*.

This plant grows in damp, rich soils throughout the Middle and Southern States, and is most commonly known by the name of centaury. It grows from one to two feet high. The stem is erect, smooth, square, with the angles winged, branches axillary, opposite; the leaves are opposite and ovate, but vary in length and width; they are heart-shaped at base, clasping half the stem, nerved, smooth, entire, acute. The flowers are a pale-red, with five petals.

*Medical properties and uses.* — Every part of this plant is a pure and very strong bitter. It is used in the form of tea, or

tincture It is good in ague and fever, and it was used in the yellow fever of Philadelphia with good effect. It may be given, even when the fever is on, in such proportions as the stomach will bear kindly; it is not apt to nauseate. It is an excellent tonic for the stomach, and promotes the appetite and digestion. It is highly recommended by *Barton*, *Chapman*, and *Elliott*, all physicians of high respectability.

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PRICKLY-ASH. *Xanthoxylum Fraxineum*.

The prickly-ash is a shrub of middling height, found in woods and moist, shady places and declivities. It grows in the

Northern, Middle, and Western States. The branches of the prickly-ash are covered with strong, sharp prickles, arranged without order, though most frequently in pairs, at the insertion of the young branches. The leaves are pinnate; the flowers appear in April and May, before the leaves are expanded. They grow in sessile umbels about the origin of the young branches, and are small and greenish. The seeds are contained in a capsule, in clusters, on a small stem. The bark is aromatic and pungent; the leaves are also aromatic, and resemble those of the lemon-tree. This odor is contained in an essential oil, residing in transparent vesicular points, on the surface of the capsules, and about the margins of the leaves. The acrimony which resides in the bark has it in a different principle, being separated by decoction, but not by distillation. The water in which the bark is boiled has a peculiarly pungent heat, which is not perceived when the liquid is first taken into the mouth, but gradually develops itself by a burning sensation in the tongue and fauces.

*Medical properties and uses.*—The prickly-ash has a good deal of reputation in the United States as a remedy in chronic rheumatism. In that disease, its operation seems analogous to that of mazerion and guaiacum, which it nearly resembles in its sensible properties. Many physicians place so much confidence in it that it is generally kept by the apothecaries in their shops. It is most frequently given in decoction, an ounce being boiled in a quart of water, and this taken in small quantities frequently repeated. *Dr. George Hayward*, of Boston, took it in his own case of chronic rheumatism with evidently good effect. He took a pint of the decoction a day, diluted with water, so as to weaken its pungency. The powdered bark may be taken in doses of from ten to twenty grains, and frequently repeated.—*Dr. Bigelow*. It is also given with good effect in cases of old indolent sores. It is given internally, and applied to the sore in the form of a wash. *Drs. Barton* and *Thatcher* both speak highly of this medicine.

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#### TO MAKE A BLUE ROSE.

Split the bark on the stem of the bush in several places carefully, and fill the places with fine indigo, and bind up the wounds carefully with soft cow manure. This should be done as soon as the sap starts.





FEVER-ROOT. *Triosteum Perfoliatum*.

This plant is met with in most parts of the United States, though not very abundantly anywhere. It grows about the borders of woods, in rich, shady places, and in the heads of hollows, where the ground is very rich. Its common names are fever-root and wild ipecac. It generally grows in limestone countries. The flowers are in whorls around the stalk, just above the leaves. The flower is purple; the stalk of the plant is round, and grows from one to three feet high; the leaves are opposite, and in pairs. The root is perennial, and subdivided into numerous horizontal branches.

*Medical properties and uses.*—Every part of this plant is medicinal. All parts of the plant, herb and root, are bitter, but the root has also a nauseous taste and smell, somewhat like that of ipecac. It is both emetic and cathartic. The bark of the root acts with pretty good certainty on the stomach and

bowels, both as an emetic and cathartic. It rarely fails when given alone; but when given with calomel it is equal to jalap. Both the watery and spirituous extract of the root are likewise efficient remedies; a decoction, or tea of the leaves, produces perspiration. The bark of the root should be dried and powdered, and kept in vials, excluded from the air and light. The stock should be renewed every year, which is easily done by every farmer. The medicine is good in fever, — the bark of the root to puke and purge, and the leaves to sweat. The dose of the bark of the root is from twenty to thirty grains, and of the extract something less.

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### TO RESTORE THE HAIR IN BALDNESS.

Castor-Oil, two ounces.  
Tincture Cantharides, half an ounce.  
Acetic Acid, half an ounce.  
Strong Water of Ammonia, one and a half ounces.  
Oil Nutmegs, half drachm.  
Oil Lavender, half drachm.

Mix in lotion. The head should be perfectly cleansed from all dirt and dandruff, with soap and warm water, and this lotion applied freely, and rubbed in with a stiff hairbrush, once a day. In a week or two, its good effects will be manifest.

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### BLACK VARNISH FOR LEATHER.

Gum Shellac, four pounds.  
Clean Rosin, three pounds and a half.  
Gum Guaiacum, three pounds and a half.  
Spirits of Wine, or Alcohol, four gallons.  
Lampblack, ten and a half ounces.

Mix all together occasionally, and stir till all the gums are dissolved. This is one of the best black varnishes for leather. Put it on in the usual way, with a soft brush.

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### TOOTHACHE BALSAM.

Kreosote, one drachm.  
Oil Cloves, one drachm.  
Tincture Camphor, two drachms.  
Oil Petroleum, two drachms.

Mix them thoroughly, and cork tight for use. A few drops of this mixture, on cotton and applied to the nerve of the tooth, will relieve the pain.

AMERICAN HELLEBORE. *Veratrum Viride*.

This plant grows abundantly in many parts of the United States, in swamps and wet meadows. It appears early in the spring. From its large, bright-green leaves, and its springing up earlier than the grass around it, it is always conspicuous. The veratrum sends up a straight, leafy stalk, which frequently

acquires the full height of a man. It not only grows in meadows, but by the sides of brooks, in rocky and mountainous situations, from Canada to Carolina. Its flowering time is from May to July.

The root of this plant is thick and fleshy, its upper portion truncated, and its lower half solid, sending forth a multitude of large whitish radicles. The stem is from three to five feet high, roundish, solid, striated and pubescent. Throughout the greater part of its length it is closely invested with the sheathing cases of the leaves. The lower leaves are large, — from six inches to a foot long, — thick and strong, the lower part of their edges meeting round the stem. The upper leaves are narrower; the flowers are surrounded by a green capsule. The seeds are flat, and the root has a bitter taste, accompanied with an acrimony, and leaves a durable impression on the mouth and fauces when chewed or swallowed. It abounds with a resinous juice, which adheres closely to the knife with which it is cut. The decoction of the root has an intensely bitter taste.

*Medical properties and uses.*—The veratrum is celebrated for its good effects in gout. It so closely resembles the veratrum album of Europe, that it has been tried by many physicians, to see if it possessed the properties of that plant; and the result of the trials has established beyond doubt the similarity of the powers of the American article to that of the European. It has proved a valuable remedy in chronic rheumatism, gout, and some cutaneous affections. It is certainly a powerful emetic when given in large doses, and the effect continues a long time. In over-doses, it affects the functions of the brain and nervous system in a powerful manner, producing giddiness, prostration of strength, and diminution of the vital powers. Like the colchicum autumnale, the violent impression which it makes upon the system has arrested the paroxysm of gout, and given relief in some unyielding cases of chronic rheumatism. Like those substances, it requires to be given with great caution, and under vigilant restrictions. A solution of this medicine is more powerful than the powder. The dose of the powder, as an emetic, is from six to ten grains; ten grains is a large dose; it would be better to commence with four grain doses. In these doses, the medicine can be borne well, and it has a fine effect, according to *Dr. John Ware*, of the Boston alms-house. It rarely purges. It is slower than other emetics in producing its effect. It enters into the ointment for the cure of leprosy.—(*See that prescription.*.)

But the great value of the medicine is to be found in its happy effects in gout. The mode of administration is in the form of tincture. A saturated tincture is made in wine, and three parts of this tincture is mixed with one of the wine of opium. Of this mixture, from fifteen to twenty drops are to be taken, and repeated if necessary. In some cases, however, a drachm of the mixture will be required to give relief, which quantity generally vomits, and always gives relief. The proper method of preparing the tincture is to macerate eight ounces of the sliced root in two pints and a half of Spanish white wine, for fifteen days, and filter from the fæces. Before given, it must be mixed with one fourth its quantity of the wine of opium. From fifteen drops to sixty is a dose. In some cases, less than the nauseating point will cure the disease; but if it should not, it must be carried to that point, although it should not be carried beyond it. When carried to that point in this form, it generally purges also; the effect then is certain and effectual.

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### TOOTH POWDER.

Charcoal of soft wood, as lynn, or poplar. Pulverize it fine, and sift it through gauze. Then add, to every table spoonful of the powdered charcoal, a tea spoonful of fine blown salt, and grind them together till they are thoroughly mixed. This should be applied to the teeth with the finger. It cleanses them thoroughly, and sweetens the breath.

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### ANOTHER TOOTH POWDER.

Supercarbonate of Soda, half an ounce.  
 Pulverized Orris Root, half an ounce.  
 Cream Tartar, half an ounce.  
 Oil of Roses, ten drops.

Mix them properly. This may be used with the finger or a soft toothbrush.

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### ANOTHER TOOTH POWDER.

Carbonate of magnesia, any quantity, perfumed with the oil of cinnamon or neroli. This is the best tooth powder for children. The teeth should always be cleaned after eating, if you wish to keep the breath sweet.



AMERICAN COLOMBO. *Frasera Carolinienses*.

The American colombo is one of our most elegant indigenous plants, and the only one of its genus hitherto discovered. It sends up a long stem, of a yellow color, strong, succulent, spindle-shaped, solid and smooth, which rises from five to ten feet high. The leaves are sessile, entire, glabrous, of a deep-green color and disposed in whorls, which commence at the root and ascend to the summit, with successively diminishing intervals. The lower leaves, from five to twelve in number, are elliptical, obtuse, a foot or more in length, by about four inches in breadth, and lie upon the ground in the form of a star; these continuing, the whorls upon the stem are successively smaller as they ascend.

The flowers are numerous, large, of a yellowish-white color, and disposed in a beautiful terminal pyramidal panicle, from one to five feet long, the branches of which spring from the axils of the upper leaves. It flowers from May to July. It flourishes in the Middle, Southern and Western States, and prefers rich woodlands and meadows. It is triennial, or only flowers once in three years. The root is the medical part of the plant; it is long, round and fleshy, and of a yellowish color without and within. It should be gathered in the fall of the second or the spring of the third year. It should be cut transversely in rings half an inch thick, and carefully dried.

*Medical properties and uses.*—The fracera is a mild tonic, calculated to meet the indications alike with the other bitters of its kind. It is a good and pleasant tonic in indigestion and dyspepsia, and is a general stomachic, improving the appetite and digestion. It is given in infusion and in substance,—one ounce of the pulverized root infused in a pint of boiling water. A small wine-glassful may be taken once in two hours, or from thirty to sixty grains of the powdered root may be taken in substance, in sweetened water, from three to five times a day. But the most common way of using the colombo is in combination with other tonics, such as gentian, orange peel and colombo, of each one ounce, made fine; add to them one quart of whiskey, of which bitter a table spoonful may be taken in water three times a day, as a tonic, in cases of debility.

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### PILLS OF BALSAM COPAIBA.

Balsam Copaiba, five drachms.  
Carbonate Magnesia, three drachms

Mix them together, and a mass is made, of which the pills may be formed. This is a very convenient way of taking this nauseous drug. They are good in any case where copaiba is required; from three to six pills may be taken a day.

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### A NEW CEMENT FOR THE TEETH.

Quicklime, thirteen parts.  
Anhydrous Phosphoric Acid, twelve parts.

The lime must be finely pulverized, and chemically pure. The anhydrous phosphoric acid is obtained by the combustion of phosphorus in dry air. The two substances are to be quickly

mixed together, so as to form a powder. This is to be introduced into the cavity of the tooth, previously dried, and to be moistened with a small quantity of water. — “*Encyclopedia of Med. Science.*”

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### REMEDY FOR ENLARGED TONSILS, WHEN CHRONIC.

Extract Black Walnut hulls, four drachms.  
Water, sixty-four drachms.

Mix, and dissolve. Apply this to the tonsils internally, and also apply it externally, three or four times a day, till the tonsils are reduced to their proper size, which will be in one or two weeks.

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### AN OINTMENT FOR WHITE, SCALY LEPROSY.

Black Hellebore Root, finely powdered, two ounces.  
Citron Ointment, one ounce.  
Flour Sulphur, two ounces.  
Hog's Lard, four ounces.

Mix. Anoint the parts affected, with this ointment, morning and night. This form of leprosy throws off the scales in thin, white flakes, and in the spring of the year, the spots look red and angry, but are not raw. The patient should live light, and keep the bowels open.

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### HAIR CREAM.

Castor-Oil, one ounce.  
Spirits Hartshorn, half an ounce.  
Oil of Neroli, one drachm.

Mix these articles well; then add:

Sweet Hog's Lard, one ounce,

and stir till all are mixed, (they should not be heated.) This gives a beautiful gloss to the hair, makes it healthy, and grow finely. The hair should be frequently brushed with a hairbrush, to keep it free from dandruff; but little, however, will accumulate, either of dirt or dandruff, if one of the above oils are used.

## A REMEDY FOR SPREADING SORES ON THE LEGS AND ARMS.

Sirup of Wild Violets, twelve ounces.  
Refined Borax, two drachms.

Mix. One table spoonful to be taken night and morning, and the sores to be poulticed with flax-seed cataplasm, with a small quantity of sulphur in it.

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## A REMEDY FOR SCALDHEAD.

Infusion of Fleabane, one pint.  
Nitric Acid, two scruples.  
Sirup of Marsh Mallow, three ounces.

Mix. Two spoonfuls of this mixture are to be taken every day, gradually increasing the dose. The scalp must be washed two or three times a day with the following lotion :

Sulphate of Soda, three drachms.  
Spanish Soap, half an ounce.  
Alcohol, two drachms.  
Lime-Water, one pint.

Mix.

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## FOR SPONGY SCALDHEAD.

First detach the crust with potato poultices. Then wash the head with bran water, containing two drachms of sub-carbonate of potash to the pint, and rub the parts with the following ointment :

Deutoioduret of Mercury, eighteen grains.  
Gum Camphor, twelve grains.  
Lard, one ounce.

Mix, and apply it two or three times a day, or after each washing.

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## SARSAPARILLA BROTH.

Recommended by *Dr. Egan*, in phagedenic ulceration.

Decoction of Sarsaparilla, Comp., one and a half pints.  
Fresh Beef, half a pound.

Boil to half the quantity, and take it in the course of the day

### CURE FOR WARTS.

The hydrochlorate of ammonia, dissolved in water, and applied to them sufficiently long, will take them away; or the hydrochlorate of lime will answer the same purpose. In either case, the remedy must be continued till the warts are entirely removed; otherwise it will not succeed.

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### AN OINTMENT FOR GOUT AND RHEUMATISM.

The terchloride of gold made into an ointment with lard is said to speedily relieve the pain of gout or rheumatism. It stains the skin purple, which can be easily removed by washing it with urine. — “*German remedy.*”

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### URE'S REMEDY FOR ULCERATED PILES.

Chloric acid freely applied to the ulcerated part, being careful not to touch any other part. In a few days, a free sloughing takes place, and the disease is perfectly cured.

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### OINTMENT FOR MILK-SCALD ON THE FACE OF INFANTS.

Marrow of Beef's Bones, six drachms.  
Oil of Sweet Almonds, two drachms.  
Red Peruvian Bark, in powder, one drachm.

To be well mixed and melted, to form an ointment. Apply this every day, washing it off every morning with mild soap.

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### A FINE BLACK INK.

Pulverized Nutgalls, three ounces.  
Copperas, one ounce.  
Rasped Logwood, one ounce.  
Pure Vinegar, one quart.

Mix the whole together, and shake the bottle frequently for ten or twelve days. Then add gum Arabic and white sugar, of each one ounce. Shake till all are dissolved. If the vessel be left open for a week, the ink will be the better; then cork tight for use.



### MILK OF ROSES.

Salts of Tartar, thirty grains.  
Oil of Amygdala, two ounces.  
Rose Water, six ounces.  
Oil Lavender, sixty drops.

Mix, and shake till they are intimately united.

### ANTIDOTE TO OXALIC ACID POISON.

Magnesia, two ounces.  
Water, one pint.

Mix them properly, and drink all at once. This neutralizes the oxalic acid, and destroys the poison.

### DALLEY'S CARMINATIVE MIXTURE.

Magnesia, Carbonate, two and a half ounces.  
Tincture Opium, one and a half drachms.  
Salts Tartar, fifteen grains.  
Oil Peppermint, five drops.  
Water, five ounces.  
White Sugar, one ounce.

Mix. Give from a tea to a table spoonful, according to age, in colic.

### COLOGNE WATER.

Oil Bergamot, one ounce.  
Oil Lavender, half an ounce.  
Oil Roses, fifteen drops.  
Oil Cloves, thirty drops.  
Oil Neroli, one drachm.  
New Milk, one quart.  
Pure Alcohol, one gallon.

Digest one day, and filter through paper.

### ANOTHER COLOGNE WATER.

Oil Bergamot, one ounce.  
Oil Lemon, one ounce.  
Oil Lavender, three ounces.  
Tincture Musk, one drachm.  
Pure Alcohol, seven pints.  
Rose Water, one pint.  
Gum Camphor, twenty grains.

Mix, and digest one day, and filter.

## ANOTHER COLOGNE WATER.

Oil Roses, five drops.  
 Oil Bergamot, one ounce.  
 Oil Lemon, one ounce.  
 Oil Rosemary, half an ounce.  
 Oil Lavender, two and a half ounces.  
 Oil Cinnamon, ten drops.  
 Pure Alcohol, seven pints.  
 New Milk, one pint.

Let the whole stand one day, and filter. All preparations of cologne should be kept closely stopped; otherwise, they will lose their fine flavor.

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## COLD CREAM.

Oil of Amygdala, four ounces.  
 Spermaceti, one ounce.  
 White Wax, two drachms.

Melt these articles together over a slow fire, stirring them constantly with a silver spoon, till the articles are perfectly mixed. Then remove them from the fire, and, as the mixture cools, add the water of roses, two ounces, stirring it till all is thoroughly mixed. Bottle it up for use. It is good to allay burning or itching in an inflamed part, or to apply to the inflammatory eruptions on children's ears or face.

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## INDELIBLE INK.

Lunar Caustic, one hundred grains.  
 Gum-Arabic, one hundred grains.

Make both fine, and add enough of water to dissolve them. Stop tight in a vial.

Water, to wet the linen before writing with the above ink:

Salts Tartar, two drachms.  
 Gum-Arabic, two drachms.

Dissolve these articles in one ounce of rain water. Wet the linen, and dry it with a smooth iron before you write on it; after writing, wash the gum out, and you have the name indelibly fixed.

## SIRUP OF IPECAC.

Root of Ipecac., bruised, one ounce.  
Pure Alcohol, one pint.

Macerate the ipecac. in the alcohol fourteen days; then filter. Evaporate the filtered liquor to two ounces; then filter again. Then add pure simple sirup, one quart. Then evaporate the whole slowly, to a proper consistence, and bottle for use. This is an elegant preparation for colds in children, or croup, whooping cough, &c. It may be given in doses of from ten drops to a tea spoonful, according to the age of the child, and repeated as often as the circumstances demand.

## SAMUEL THOMPSON'S NO. 6.

Fourth Proof Brandy, one gallon.  
Gum Myrrh, pulverized, one pound.  
African Pepper, one ounce.

Mix, and macerate for ten days, and it is fit for use. This is a good carminative; it relieves colic, it arrests mortification, and it is good in strains, to relieve pain, &c. As a general stimulant, it may be taken in tea spoonful doses, in water, and repeated as the case demands.

## LEE'S WINDHAM PILL.

Gum Gamboge, one drachm.  
Aloes Socotrine, forty grains.  
Salts Nitre, ten grains.  
Castile Soap, twenty grains.  
Water, a few drops.

Form twenty-two pills. From four to six of these pills is a dose, as a gentle purgative. Two will operate on some persons.

## TURLINGTON'S BALSAM

Gum Benzoine, three ounces.  
Storax, refined, two ounces.  
Balsam Tolu, one ounce.  
Spirits Wine, two pints.

Mix, and shake occasionally for fourteen days, and filter. This is an excellent remedy for fresh cuts, strains, bruises, &c. It is rarely given internally.

## JUDKINS' OINTMENT.

Linseed Oil, one pound.

Heat the oil till it will turn a feather black ; then add red lead, four ounces, gradually. Stir till all are mixed thoroughly ; then add, gradually, spirits of turpentine, half a pound, and one ounce of sugar of lead, finely powdered. Stir them all together, till the whole is well mixed and cool. This is a good application to old sores or weak joints.

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## AROMATIC SPIRITS OF AMMONIA.

Oil Lavender, one drachm.  
Oil Lemons, one drachm.  
Oil Cloves, one drachm.  
Oil Cinnamon, half a drachm  
Spirits of Wine, one pound.  
Strong Spirits of Ammonia, one pound.

Mix them together. This preparation is frequently spoken of in this work, where you will see its uses.

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## ANTIMONIAL WINE.

Take of

Tartar Emetic, forty-eight grains.  
Best Madeira Wine, one pint.

Dissolve the tartar in the wine. This preparation of antimonial wine will keep longer than any other. It is given as an emetic in the dose of half an ounce, divided into three portions, and one portion given every fifteen minutes till it operates. It must then be worked off as other emetics.

It is given as a diaphoretic, in half a tea spoonful doses, repeated every hour till the patient sweats freely. Its effects may be aided by the use of warm drinks, such as balm, hyssop, sage, dittany, or ground ivy tea. This is a good emetic in croup, and, in full doses, in bilious fever, or ague and fever. In ague and fever it should be given just as the chill is coming on.

## WINE OF IPECAC.

Take of

Pulv. Ipecac., one ounce.  
Best Madeira Wine, one pint.

Add the ipecac. to the wine; shake the bottle well, and let it stand fourteen days; then filter through paper, or let it stand without filtering. The dose for a grown person is one ounce, to be given in the same way that antimonial wine is given; and for croup, in tea spoonful doses, every fifteen minutes, till it pukes freely.

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## ELIXIR VITRIOL.

Oil Vitriol, two ounces.  
Whiskey, one quart.

Add the oil slowly to the whiskey, and when cool it is ready for use. From ten to fifteen drops are enough for a dose for a weak stomach. To be taken in water.

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## PAREGORIC ELIXIR.

Take of

Opium, one drachm.  
Benzoic Acid, one drachm.  
Gum Camphor, two scruples.  
Ol. Aniseed, one drachm.  
Good Whiskey, one quart.

Make the opium and camphor fine, and add all to the whiskey; shake the bottle every day for six days; then let it stand for ten days longer, and it will be ready for use. You may pour it off, or let it stand on the fæces.

This is given in small portions, in water, in cases of cramp, wind colic, pains in the stomach and bowels, &c.

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## LAUDANUM.

Take of

Gum Opium, two ounces. \*  
Good Whiskey, one quart.

Shave the opium fine, and add it to the whiskey. Shake the bottle every day for ten days; then let it settle.

This tincture contains one grain of opium in twenty drops. Ten drops would be a moderate dose, which may be repeated in half an hour, if relief is not obtained in ordinary cases where laudanum is used.



## SIMPLE TINCTURE OF RHUBARB.

Take of

Best Turkey Rhubarb, three ounces.

Make it fine.

Good Whiskey, one quart.

Add the rhubarb to the whiskey, and shake it every day for a week; then let it stand ten days, and filter through paper, or let it stand without filtering. From a tea spoonful to a large table spoonful is a dose, according to the age of the person and the nature of the case.

A good simple purgative in costive habits. Take it at bed time, in sweetened water.

## COMPOUND TINCTURE OF RHUBARB.

Take of

Turkey Rhubarb, made fine, two and a half ounces.

Liquorice Root, bruised, six drachms.

Race Ginger, bruised, three drachms.

Saffron Flowers, three drachms.

Good Proof Whiskey, one quart.

Mix, and macerate for fourteen days, when it will be ready for use.

This is a good preparation for children in bowel complaints, where the discharges are thin and fetid, or when the child is griped. From a tea spoonful to a table spoonful is a dose, given in water. Grown persons that have cold, phlegmatic, costive bowels, will find a table spoonful of this tincture of great service, if taken at bedtime.

## AROMATIC SIRUP OF RHUBARB.

Take of

Best Turkey Rhubarb, bruised, one ounce

Cinnamon Bark, bruised.

Cloves, bruised, — of each two drachms.

Nutmeg, bruised, one drachm.

Proof Spirits, one pint.

Mix well together and shake the bottle frequently for fourteen days; then filter through paper, and add one part of sirup, made of refined sugar, and boil till it is thick. Mix this with the tincture, and shake it well.

This is good in watery discharges from the bowels of infants. A tea spoonful is an ordinary dose for a child one year old.

## SIMPLE SIRUP OF RHUBARB.

Take of

Best Turkey Rhubarb, bruised, two ounces.  
Water, one pint.

Macerate the rhubarb in the water, warm, twenty-four hours: strain it off, and add refined white sugar, two pounds, and simmer till they are well mixed; add two table spoonfuls of whiskey; stop it tight in a bottle for use. This is a good medicine, in tea spoonful doses, for infants.

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## TINCTURE OF RHUBARB AND ALOES.

Take of

Rhubarb, made fine, one and a half ounces.  
Aloes, in powder, one ounce.  
Race Ginger, bruised, half ounce.  
Proof Spirits, one quart.

Mix, and shake the bottle frequently for fourteen days, and let it settle for use. A tea spoonful or two of this is a gentle and pleasant purgative in costive habits. Good in wind colic.

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## COX'S HIVE SIRUP.

Take of

Squills, bruised, ten drachms.  
Seneca Snakeroot, ten drachms.

Add the squills and Seneca to one pint of water that has been first boiled, settled, and poured off, and simmer slowly, till you have but half a pint of water; then strain it off, and add clarified sugar, one pound, and simmer till all are well mixed. Then add.

Tartar Emetic, twenty-two grains.  
Salts Tartar, twenty-two grains.

Stir and mix them properly; while the fluid is warm, stop it tight for use.

This sirup is good in croup or bad colds in children, in ten or fifteen drop doses.

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## SPIRITS CAMPHOR.

Take of

Gum Camphor, one ounce.  
Good Whiskey, one quart.

Dissolve the camphor in the whiskey. As soon as it is dissolved it is ready for use.

## SLIPPERY ELM BARK.

The slippery elm tree is so well known in the United States, that it is unnecessary to describe it. Suffice it to say, that it grows to the height of sixty or seventy feet. The trunk attains the size of from eighteen to twenty-six or thirty inches in diameter. It grows on dry, firm soil, in all the Western and Middle States. There are several varieties of the slippery elm tree. The best variety has a thick, whitish looking bark, very brittle and mucilaginous when chewed or infused in hot water. It is quite nutritious.

*Medical properties and uses.*—Slippery elm bark is an excellent demulcent, applicable to all cases in which demulcents are employed. It is especially good in dysentery, diarrhœa, and diseases of the urinary passages. Its mucilage is highly nutritious, capable of supporting life for a long time. It is usually employed as a drink in the form of an infusion. The powder may be used stirred in hot water, with which it forms a mucilage more or less thick, according to the quantity used. The powdered bark forms an excellent poultice for burns, inflamed sores, &c. It makes an excellent lint for fistulous ulcers. It should be stripped from the trunk of the tree in June, having been previously deprived of its rough bark; it should be carefully dried in the shade, and kept dry, so that it may not mould.

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BITTER SWEET.

This genus includes several species, of which a number have been used in medicine. We shall, however, only describe the medicinal article,—the *solanum dulcemara*. This is a woody night-shade, or climbing shrub, with a slender, roundish, branching, woody stem, which, in favorable situations, rises six or eight feet high. The leaves are alternate, petiolate, ovate, pointed, veined, soft, smooth, and of a dull-green color. Many, near the top of the stem, are furnished with lateral projections at their base, giving them a hastate form. Most of them are quite entire, but some cordate at the base. The flowers are disposed in elegant clusters, somewhat analogous to cymes, and standing opposite to the leaves. The calix is very small, purplish, and divided into five blunt, persistent segments. The corolla is wheel-shaped, with five pointed reflected segments, which are of a violet-blue color, with a darker purple vein running longitudinally through their centre, and two shining

greenish spots at the base of each. The filaments are very short, and support large, erect, lemon-yellow anthers, which cohere in form of a cone around the style. The berries are of an oval shape, and a bright-scarlet color, and continue to hang in beautiful bunches after the leaves have fallen. This plant is common in Europe and North America; it flourishes most luxuriantly in damp and sheltered places. It is to be found in almost every part of the United States. It flowers from June to August. The root and stalk possess the medicinal properties of the plant. The stalk, however, is the official part of the plant.

*Medical properties and uses.*—The solanum dulcemarum possesses narcotic properties, with the power of increasing the secretions both of the kidneys and skin. When the system is fully under its influence, there is a dark-purplish color of the face and hands, and the pulse becomes feeble and soft. Its narcotic effects do not become obvious unless it is taken in large quantities. In over doses, it produces nausea, vomiting, fainting, vertigo, and convulsive muscular motions. It has been used extensively in the cure of scrofula, — (see that disease,) — and in the cure of cutaneous diseases, such as leprosy, psoriasis, and pteriasis. In these complaints, it is often decidedly beneficial, especially in combination with minute doses of tartar emetic. Its influence on the secretions is insufficient to account for its effects. They, therefore, must possess unalterative action. It is said to have been beneficially employed in chronic rheumatism. It is useful in mania connected with strong venereal propensities. The usual form of administration is that of decoction, of which two fluid ounces may be taken four times a day, and gradually increased, till some slight disorder of the head indicates the decided effect of the medicine. The dose of the extract is, from five to ten grains; an ounce to the quart of water, reduced to a pint, makes a strong decoction.

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## MILK OF SULPHUR.

This preparation of sulphur is made by a chemical process with lime and muriatic acid, and is precipitated, almost white, and nearly free from the common smell of sulphur. It is unnecessary to describe the process by which it is made. It is a more elegant preparation than the flour of sulphur.

*Medical properties and uses.*—Precipitated sulphur possesses the same properties of sublimed sulphur. It is used in oint-

ments, for the diseases of the skin, and it is taken internally, in combination with cream of tartar, for the cure of piles. The dose is from two to four drachms, taken in sweetened water.

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### SIMPLE SIRUP.

Simple sirup is made in the following manner:—Take of refined sugar, two pounds and a half; water, one pint. Dissolve the sugar in the water by means of a water-bath, and set the solution aside for twenty-four hours; then skim it clean, and pour off the sirup. If you wish to have it perfectly transparent, filter it while warm, through ivory black, in a flannel; you will then have a sirup perfectly limpid, and clear as crystal. This sirup is suitable for the most delicate and refined preparations, or to make the most elegant preserves.

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### SIRUP OF GARLIC.

Take fresh garlic, sliced, six ounces; distilled vinegar, one pint; macerate the garlic in the vinegar four days, in a glass vessel. Then express the liquor, and set it by, that the dregs may subside. Lastly, dissolve the sugar in the clear liquor, in the manner directed for sirup.

*Medical properties and uses.*—This sirup is given in chronic catarrhs of the lungs, and is particularly beneficial in catarrh of children. A tea spoonful is a dose for a child one year old, and so in proportion to age. It may be repeated several times in the course of the day.

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### NUX VOMICA.

The nux vomica is the seed of a fruit which grows on a tree of a moderate size, with numerous strong branches, covered with a smooth, dark-gray bark. The young branches are long, flexuous, very smooth, dark-green, and furnished with oval, roundish, entire, smooth, and shining leaves, having three or five ribs, and placed opposite to each other on short foot-stalks. The flowers are small, white, funnel-shaped, and disposed in terminal corymbs. The fruit is round, about as large as an orange, covered with a smooth yellow or orange-colored hard or fragile rind, and containing numerous seeds, imbedded in a juicy pulp. The only officinal part of the plant is the seed, and



to these the title of *nux vomica* is applied. They are flat, circular, about three quarters of an inch in diameter, and two or three lines in thickness, generally somewhat curved, with a depression on one side, and a corresponding prominence on the other. They are thickly covered with fine, silky, shining, ash-colored or shining-gray hairs, attached to a thin, fragile coating, which closely invests the internal nucleus or kernel. This is very hard, horny, usually whitish and semi-transparent, sometimes dark-colored, and opaque, and very difficult to powder. The seeds have no odor, but a very acrid, bitter taste, which is much stronger in the kernel than its capsule. They impart their virtue to water, but more readily to alcohol. It is from this seed that the *strichnine* is made, and also the *brucina*.

*Medical properties and uses.*—*Nux vomica* is very peculiar in its effects upon the system. Its chief effects appear to be upon the nerves of locomotion, and this is probably exerted through the medium of the spinal marrow. In full doses it produces involuntary contractions of the muscles, of a permanently rigid character, which we observe in tetanus, but at the same time starts and muscular spasms are apt to occur, alternating with muscular relaxation, as if the patient had received a shock of electricity. *Nux vomica* has long been employed as a medicine in India, and by the Arabian physicians. It has also been used extensively in Europe and America. It is certainly a valuable medicine in some diseases. It is also a most potent and powerful poison. It is what is known, by many persons, by the name of wolf's-bane. A small portion of the powder of the nut, placed on meat, and given to any kind of an animal, as a wolf, dog, fox, &c., will kill it as soon as it can get a drink of water. The *strichnine*, which is made of the nut, is still more powerful: the fourth of a grain will kill a dog, crow, or hawk. Nevertheless, when judiciously used, we have no more efficient remedy in the *Materia Medica* than *strichnine*, or the extract of *nux vomica*. I have prescribed these preparations in several diseases, in the body of this work. I have, however, introduced it here more particularly, to give the farmer the knowledge of its utility in killing wolves, and sheep-killing dogs, crows, hawks, rats, mice, &c. It may be given to any of these creatures, in the most convenient way you may devise, — on meat, cheese, fruit, or in eggs, &c.

## TINCTURE OF ASAFÆTIDA.

Take of

Asafætida, (Gum,) four ounces.  
Alcohol, two pints.

Mix. Macerate fourteen days, and filter through paper.

*Medical properties and uses.*—The tincture of fœtida is a good carminative, and relieves wind colic, hysteria, cramp in the stomach and bowels. It enters into Dewees' mixture for children. Dose, from ten drops to a tea spoonful, according to the age and strength of the patient, and the violence of the disease for which it is given. It turns the water milky when poured into it. An infant may take from one to three drops for a dose. It may be repeated as often as the case requires. Say, once in thirty or forty minutes, till relief is obtained.

## TINCTURE OF DIGITALIS.

Take of

Dried Leaves of Digitalis, four ounces.  
Good Proof Spirits, one quart.

Macerate fourteen days, and filter through paper. In preparing this tincture, great attention should be made to the solution of the leaves, according to the rules laid down under the head Digitalis; which are, to take the leaves of the second year's growth, pure and sound, otherwise the preparation will be inefficient. The tincture possesses all the virtues of the plant. The dose is ten drops, to be repeated two or three times a day. It is good in consumptive coughs, and various other diseases, as you may see in different parts of this work.

## TINCTURE OF IODINE.

Take of

Iodine, half an ounce.  
Alcohol, half a pint.

Dissolve the iodine in the alcohol, and keep it stopped tight.

*Medical properties and uses.*—This tincture is used in scrofula, goitre, and in various strumous conditions of the system. The dose is from twenty to forty drops, in sirup, three times a day. It is also used as an external application to chronic indurated ulcerations of the breasts, discharging sanious fluid. It should be applied with a camel's-hair pencil. I have applied it to the cervix uteri, in cases of chronic inflammation of that organ, with great advantage. Also, to chilblains on the feet and hands.

## TINCTURE OF MYRRH.

Take of

Gum Myrrh, in powder, three ounces.  
 Alcohol, twenty ounces.  
 Water, ten ounces.

Mix. Digest for fourteen days, and filter through paper.

*Medical properties.*—The tincture of myrrh is recommended as an internal remedy for warming the general system, attenuating viscid juices, strengthening the solids, opening obstructions, particularly those of the uterine vessels, and resisting putrefaction. The dose is, from fifteen to fifty drops, taken three times a day, on sugar. But it is more valuable as a remedy in the cure of old sores, especially where the bones are affected. The parts should be wet with it twice a day, and then dressed with some suitable ointment.

## FOWLER'S SOLUTION.

White Oxide of Arsenic, sixty-four grains.  
 Carbonate of Potash, sixty-four grains.

Reduce them to a fine powder, and add to them, in a glass bottle, half a pound of distilled water; place the bottle in an iron vessel, half full of sand; boil the water in the bottle till the arsenic and potash are dissolved, then add enough of warm distilled water to make a pint. Add one ounce of compound spirits of lavender. Shake well, and stop close for use.

*Medical properties.*—Fowler's solution has been used for cleansing foul ulcers, such as cancers, &c. It has also been used for the cure of ague and fever. For a child from two to six years old, a drop for each year may be given; but over that age, less. Twelve drops is a dose for a grown person, twice a day, for four days; then a dose of castor-oil should be given. This, no doubt, is the active ingredient in the celebrated Sappington's Ague Pills. It should be used very cautiously; it is rather a dangerous remedy, if rashly used; yet, in judicious hands, it is safe.

## PEPPERMINT.

Of the different mints, this is the one which has the greatest degree of pungency. This plant is so well known, that it needs no description here. The leaves have a strong, rather disagreeable smell, and an intensely pungent aromatic taste, somewhat

resembling that of pepper, and accompanied with a peculiar sensation of coldness. They afford an essential oil, rich in the aromatic quality of the herb. It also contains a small portion of camphor.

*Medical properties and uses.*—Peppermint is used as a stimulant carminative, to relieve nausea, griping, or colic, and, very frequently, to cover the unpleasant taste of other medicine. It is used in hysterics, vomiting, &c. It is used in the form of tea and essence. (See Essence of Peppermint.) It is a fashionable and pleasant carminative. It imparts to the system a pleasant glow and uniform warmth.

### PENNYROYAL.

This herb possesses properties similar to those of the peppermint. But it is more acrid, and less agreeable to the palate. It may be used in any case where the peppermint is admissible. Dr. Withering observes, that “the expressed juice of the pennyroyal, with a little sugar, is a useful remedy in whooping cough.” We cannot testify to this, having more efficient remedies for that disease.

### FLOUR OF SULPHUR.

Sulphur is a simple inflammable substance, found in nature nearly pure, and likewise in combination with several of the metals. The sulphur of commerce is the product of volcanic countries. It is naturally mixed with earthy matter, from which it is freed by sublimation. Pure sulphur is of a light-yellow color, is insipid, has a faint smell when rubbed or heated, is very fusible and volatile; and, when heated in atmospheric air, burns with a blue flame, and suffocating fumes. It is insoluble in water or alcohol, but is dissolved by oils, and combines with the alkalies, several of the earths, metals and metallic oxides.

*Medical properties and uses.*—Pure sulphur is gently purgative, and promotes insensible perspiration. It seems to pass through the whole habit, and manifestly transpires through the pores of the skin, and can be detected by its smell on the surface and in the clothes of those who have taken it. If there be any silver in the pocket, it tarnishes it black. It is a celebrated remedy against cutaneous diseases, especially the itch; it should

be externally applied, as well as taken in small portions internally, for several days. It is not without some claim to merit in asthma, bad coughs, and consumption, but particularly in chronic catarrh. In doses that will operate gently on the bowels, it is good in piles and common costiveness. The dose is from two to three tea spoonfuls, at bedtime, in molasses, or milk and water sweetened.

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### COMPOUND TINCTURE OF SENNA.

Take of,

Leaves of Senna, three ounces.  
Root of Jalap, bruised, one ounce.  
Coriander Seed,  
Caraway Seed,—of each, bruised, half an ounce.  
Lesser Cardamon Seeds, bruised, two drachms.  
Good Whiskey, seven pints.

Digest fourteen days; filter, and add refined sugar, four ounces.

*Medical properties and uses.*—This tincture is an excellent carminative and gentle laxative, especially for those who have been accustomed to the use of spirituous liquors. It often relieves flatulency and colic, where the common cordials have but little effect. Dose, from one to two ounces, taken on a fasting stomach, or at any time, if the case should be urgent.

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### MUSTARD.

This is a well-known plant, cultivated in gardens and in the fence corners. The leaves and buds are used for salad in the spring and summer. The seeds are the medicinal part of the plant.

*Medical properties and uses.*—Mustard-seed is stimulant, carminative, epispastic, rubefacient, and aperient. The ground mustard is an excellent condiment for a weak stomach. It is freely eaten on cold meat. When wet with vinegar and applied to the skin, it irritates it very much, and excites an increased action; hence, it is useful in diseases where the extremities are cold. It forms an excellent cataplasm. If given internally, combined with salt, and mixed in a glass of water, it acts as an emetic. If the seeds be swallowed whole, at bedtime, they will keep the bowels open. They are good in weak and languid digestion. The mustard is one of the best herbs cultivated in our gardens. The white mustard is the best for medical as well as culinary purposes.



## GUM GUAIAACUM.

Gum guaiacum is obtained from the *lignum vitæ* by exudation. Both the wood and gum are used in medicine. The wood is hard and heavy, and of a yellowish color; has but little smell and a moderately bitter taste. The virtue of the wood depends upon a small portion of resinous matter which it contains. Gum guaiacum is brittle, of a deep-greenish color, sometimes a little reddish. It has a pungent, acrid taste.

*Medical properties and uses.*—It is employed to promote the action of mercury in confirmed cases of lues venerea. It also alleviates many of the unpleasant symptoms that arise from a protracted course of mercury. The general virtues of guaiacum are those of a gently warming stimulant. It strengthens the stomach and other viscera, and greatly promotes the discharge of urine and perspiration. Hence, it is of special service in cutaneous eruptions, and disorders arising from an obstruction in the secretory glands. It is also good in chronic rheumatism. It is also laxative. The best form for its administration is either in pills or tincture. (See Tincture Guaiacum.) It may be given in tea spoonful doses, in sweetened milk and water, three times a day, or from eight to ten grains may be taken, in the form of a pill, in twenty-four hours.

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## HIERA PICRA.

*Recipe:* Socotrine Aloes, one pound.  
White Canellæ Root, the bark, three ounces.

Powder them separately, and then mix them.

*Medical properties and uses.*—Hiera picra is a pleasant purgative. It is gently carminative, and emmenagogue. It is generally made into a tincture with spirits, and taken in one or two tea spoonful doses, in the morning.

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## DOVER'S POWDER.

*Recipe:* Powdered Ipecac.,  
Powdered Opium,—of each, equal parts.  
Sulphate of Potash, eight parts.

Grind them together into a fine powder. Be careful to have the articles thoroughly mixed.

*Medical properties and uses.*—In this preparation, we have the example of the power which one medicine has of modifying

the action of another; the ipecac. rendering the operation of the opium a sudorific much more certain than it would be. It also appears to diminish its narcotic effects. This powder is an excellent sudorific, and as such was recommended by Dr. Dover in chronic rheumatism, and also in dropsy. It may be given in any of those diseases where it is difficult to produce a sweat. From eight to sixteen grains is the dose for a grown person, and less for children. Some warm teas should be drank, and the patient be covered in bed.

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### ELECTUARY OF SENNA.

*Recipe:* Leaves of Senna, eight ounces.  
 Coriander Seed, four ounces.  
 Root of Liquorice, three ounces.  
 Figs, one pound.  
 Pulp of Prunes, one pound.  
 Pulp of Tamarinds, half a pound.  
 Double Refined Sugar, two and a half pounds.

Powder the senna with the coriander seeds, and sift out ~~ten~~ ounces of the mixed powder. Boil the remainder with the figs and liquorice, in four pounds of water, to one half. Then, press out and strain the liquor. Evaporate this liquor to one pound and a half, then add the sugar and make a sirup. Add this sirup by degrees to the pulps, and, lastly, mix in the powder.

*Medical properties and uses.*—This electuary is a very convenient laxative, and has long been in common use among physicians. Dose. — Take, to the size of a nutmeg or more, as occasion may require. It is an excellent laxative, especially for old ladies who are inclined to be of a costive habit. It is safe and innocent.

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### TINCTURE OF KINO.

*Recipe:* Gum Kino, in powder, two ounces.  
 Good Whiskey, one pint and a half.

Digest seven days, and filter.

*Medical properties and uses.* — This is a very astringent tincture, and is good in some cases of diarrhœa, and in lientery. The dose is, from one to two tea spoonfuls, according to the strength of the patient. Children take less. It may be repeated once or twice a day. It should never be combined with laudanum.

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## ESSENCE OF PEPPERMINT.

Take of

Oil of Peppermint, two ounces.  
Strong Whiskey, one quart.

Mix the oil in the whiskey, and shake till the oil all disappears.  
Twenty or thirty drops are enough for a dose.

It may be given for pain in the stomach, or wind colic, &c.

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## VINEGAR OF SQUILLS.

Take of

Squills, bruised, two ounces.  
Distilled Vinegar, one pint.

Mix the vinegar and squills together, and let them stand seven days; then express the liquor, and bottle it up close till the fæces all settle, when you must pour off the clear liquor.

In small doses this is good for a cough; in large doses it pukes.

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## OXYMEL SQUILLS.

Take two pounds of refined sugar, and one pint of water; mix and simmer them till a perfect sirup is formed. Then add one pint of vinegar of squills; mix; and lastly, add two ounces of good spirits of any kind. Mix, and bottle close for use.

This medicine, given in half tea spoonful doses, is good for a bad cold or cough.

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## COUGH MIXTURE.

Take of

Oxymel Squills, one ounce.  
Cox's Hive Sirup, one ounce.  
Wine of Ipecac., two ounces.

Mix. A small tea spoonful may be taken, in water, three or four times a day, for a cough or bad cold. It is excellent in croup, especially if given freely enough to puke at first; after which, you must lessen the dose.

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## LIME-WATER.

Take of well-burnt, unslacked lime, one half pound, and water one gallon. Add the lime to the water, in a jug or jar, and

let it stand till the lime is slack and settled. The clear water is then ready for use. From a tea spoonful to a table spoonful is a dose, according to the age of the patient. It is good in all cases of acid on the stomach.

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## SECOND RECIPE FOR LIME-WATER.

Take half a pound of unslacked lime, a ball of rye dough as large as a hen's egg, one tea cupful of wood soot, and half a gallon of water. Add the materials to the water, and let them stand six days. From a table spoonful to a small wine-glassful may be taken three times a day, in dyspepsia.

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## COMPOUND TINCTURE OF GENTIAN.

Take of

Gentian Root, bruised, two ounces.  
Orange Peel, bruised, two ounces.  
Cardamon Seeds, bruised, half ounce.  
Proof Whiskey, one quart.

Add the medicine to the whiskey, and shake the bottle every day for fourteen days, when it will be ready for use.

This is an elegant bitter, much used in dyspepsia and debilitated states of the digestive organs. The stomach should always be cleansed before it is given.

It is not admissible where there is fever. Dose, from one to two tea spoonfuls, in water; to be repeated before breakfast, dinner and supper.

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## DEWEES' TINCTURE OF GUAIACUM.

Take of

Best Gum Guaiacum, in powder, four ounces.  
Carbonate of Soda, one and a half drachms.  
Pimento, in powder, one ounce.  
Proof Whiskey, one pint.

Digest for a few days, say ten; dose, from one to two tea spoonfuls three times a day, given in milk.

This has been found very efficacious, both in the cure of suppression of the menses and in painful menstruation. Take a tea spoonful three times a day, in water.

## AMMONIATED TINCTURE OF GUAIACUM.

Take of

Gum Guaiacum, in powders, four ounces.  
Spirits Ammonia, one and a half pints.

Add the guaiacum to the spirits of ammonia, and let them stand fourteen days, shaking the bottle occasionally; when it will be ready for use.

This is a celebrated remedy in the treatment of chronic rheumatism. The dose is from one to two tea spoonfuls three times a day, given in milk, or some mucilaginous tea. The stomach must be well cleansed before this tincture is used. The diet must also be light.

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## TINCTURE OF LOBELIA.

Take of

Lobelia, the herb, four ounces.  
Proof Spirits, one quart.

Add the herb to the liquor; shake the bottle frequently for fourteen days, and then filter through paper. This tincture possesses all the active emetic and narcotic properties of the lobelia. It is sometimes used in asthma, and in other cases where emetics are necessary, to give speedy relief to the lungs from phlegm; or, in cases where strong poisons have been swallowed, to dislodge them from the stomach.

It does not act on the liver, or any of the secreting organs; but it acts promptly and powerfully on the coats of the stomach. The dose is from one to two tea spoonfuls, repeated every fifteen minutes, till it pukes. It should be used with great caution especially in weak constitutions.

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## TINCTURE OF PEACH-KERNELS.

Take of

Peach-Kernels, half pint.

Bruise them, and add one quart of whiskey. Take a table spoonful three times a day.

This will often cure gravel when it is in the form of sand or fine gravel in the bladder. We have known the patient to pass off gravel in large quantities while using this remedy.



## DOMESTIC COUGH SIRUP.

Take of

Cumfrey Root, one ounce.  
 Elecampane Root, one ounce.  
 Nettle Root, one ounce.  
 Hoarhound Leaves, one ounce.  
 Spikenard Root, half ounce.

Make them all fine, and boil them in one quart of water, down to one pint; strain the liquor off, and, when settled, pour it off again. Add to it one pint of strained honey, and simmer down slowly to a pint and a half.

A table spoonful or less may be taken from four to six times a day, in cases of bad cough. It is healing and strengthening to the lungs.

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## TINCTURE OF CAYENNE PEPPER, AND MYRRH.

Take of

Gum Myrrh, one ounce.  
 Cayenne Pepper, half ounce.  
 Proof Spirits, one quart.

Add the myrrh and pepper to the whiskey; shake the bottle occasionally for fourteen days, and filter through paper.

This is a warm carminative, and is good in cases of wind colic or cramp in the stomach, from drinking too much cold water. The dose is from ten drops to a tea spoonful, according to the age of the person and nature of the case. It should always be well diluted with water.

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## OINTMENTS.

## OINTMENT OF NUTGALLS.

Take of

Powder of Nutgalls, one ounce.  
 Hog's Lard, six ounces.

Mix them properly. This ointment is good for piles, and old phlegmatic soft sores.

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## BASILICON OINTMENT.

Take of

Rosin, five ounces.  
 Bees-Wax, two ounces.  
 Hog's Lard, eight ounces.

Melt them gently together. This ointment is often used as a dressing for sores of various kinds, blisters, &c.

## OINTMENT OF ROSES.

Take fresh damask roses, gathered in the morning, when the dew is on; clip them carefully from the stalks; place them in hot water, and let them all be covered by it; lay a weight on them, and let them remain till the water cools. Then wring the water out through a towel. Take of this water

Two fluid ounces.  
Oil of Almonds, two ounces.  
Spermaceti, half an ounce  
White Wax, sixty grains.

Melt the oil, spermaceti and wax together, by means of a water-bath; then add the rose-water, and stir the mixture constantly, till it is cold. Ointment must be kept close in a glazed vessel.

This is a pleasant cooling application to irritated and excoriated surfaces. It is the best application a lady can use for chapped lips and hands, in cold weather.

## GREEN OINTMENT.

Take of

Basilicon Ointment, half pound.  
Finely Pulverized Verdigris, half ounce.

Melt the basilicon slowly, and then add the verdigris, and stir it till it is well mixed. This is a good dressing for old sores, and ringworms on the head or face.

## KENTISH OINTMENT.

Take of

Linseed Oil, half a pint.  
Very Fine Lime, any quantity.

Stir the lime into the oil, till it becomes of the consistence of thick cream. This is a good dressing for burns or scalds.

## OINTMENT FOR TETTER.

Take of the flowering buds of ragweed, a double handful; of hog's lard, two ounces; of water, three pints; cut and bruise the limbs and blossoms of the ragweed; pour the water to them, and simmer half the water away; then add the lard, and strain

and squeeze all the fluid from the herb. Simmer this slowly, till all the water is evaporated.

Apply this ointment cautiously to the tetter once a day, till it is killed.

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### EYE-SALVE.

Take of

Mild Mercurial Ointment, half ounce.  
Chinese Vermilion, ten grains.

Mix them intimately. This ointment will cure the eyelids when they are diseased and inflamed by wild hairs. First pull out the wild hairs, and then apply this ointment every night at bedtime.

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### OINTMENT FOR SCROFULOUS ULCERS.

Take of

Basilicon Ointment, one ounce.  
Venice Turpentine, half ounce.  
Verdigris, pulverized, two drachms.  
Beef's Gall, half ounce.

Mix them perfectly over a slow fire; dress the sores, in king's evil, twice a day. Do not wet them, but wipe them clean with a soft rag.

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### TARTAR EMETIC OINTMENT.

Tartar Emetic, one drachm.  
Hog's Lard, one ounce.

Mix them well together.

This ointment may be applied to the skin by rubbing it in with the finger on any part where you wish to raise pustules, and keep up an irritation on the skin. The pustules resemble those of smallpox; and, when ripe, should be opened, and the sores dressed with cream, or simple cerate.

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### SIMPLE CERATE.

Take of

White Wax, four ounces.  
Hog's Lard, eight ounces.

Melt them gently together. This is one of the mildest dressings we can apply to an irritable sore or tender wound.

## PILLS.

## CRUMBACKERS' PILLS.

Take of

Cape Aloes, sixteen grains.  
 Rhubarb, twenty grains.  
 Oil of Sassafras, two drops.

A few drops of water will form the mass. Form twelve pills  
 Take two or three at bedtime, for simple costiveness.

These pills are good in some forms of dyspepsia.

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## ANTI-BILIOUS PILLS.

Take of

Calomel, twenty-four grains.  
 Aloes Socotrine, twenty-four grains.  
 Pulv. Jalap, twenty-four grains.  
 Tartar Emetic, three grains.

Mix into a mass, with a few drops of water, and form twenty-four pills, from four to six of which is a dose. They should be worked off with gruel, without salt in it.

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## ANOTHER ANTI-BILIOUS PILL.

Take of

Cape Aloes,  
 Pulv. Rhubarb,  
 Scammony, — of each twelve grains.  
 Tartar Emetic, two grains.

Mix into a mass, with a few drops of water, and form twelve pills. Take three or four at bedtime. If they should not operate by morning, take two more.

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## MILD PILLS.

Take of

Aleppo Scammony,  
 Cape Aloes,  
 Pulv. Rhubarb,  
 Castile Soap, — of each twenty grains.  
 Ground Ginger, ten grains.

Mix into a mass, with a few drops of water, and form into twenty-four pills; of which, from three to six is a dose for sick headache, costive bowels, or piles, &c.

## COOK'S PILLS.

Calomel, six grains.  
Aloes, six grains.  
Rhubarb, six grains.

Form six pills. Six is a common dose. This pill is anti-bilious, and is a good pill in fevers.

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## ACTIVE PILLS.

Aloes,  
Rhubarb,  
Jalap,  
Castile Soap,  
Gamboge,—of each twenty grains.  
Tartar Emetic, three grains.

Form twenty-four pills. Six is a common dose; they may be used to cleanse a foul stomach, or in common fevers.

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## COOLING POWDERS.

Take of

Cream Tartar, one drachm.  
Refined Saltpetre, twenty grains.  
Tartar Emetic, one grain.

Mix intimately, and divide into six powders; one of which may be taken every hour, in a cup of balm or hyssop tea, in case of fever, till the fever is cooled off.

The patient should always cleanse the stomach well before these are given. They produce a gentle sweat, and break the fever.

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## DIAPHORETIC DRAUGHT.

Take of

Parsley Tea, half a pint.  
Cream Tartar, half an ounce.

Dissolve the cream tartar in the tea, and drink it at four draughts, half an hour apart.

This will often remove an obstruction in making water, especially in child-bed.



## T O N I C S .

## T O N I C   P I L L S .

Take of

Copperas, two drachms.

Burn all the water out of it, till the powder is dry and white. Pulverize it fine; then add to it one drachm of borax, made fine, and a little flour. A few drops of water will form the mass. Form twenty-four pills; take one three times a day. These pills are good in cases of weak stomach, weak nerves, or obstructed menses.

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## D O M E S T I C   T O N I C .

Take of

Yellow Poplar Bark,  
Dogwood Bark,  
Wild Cherry Bark, — of each one ounce.

Make all fine, and add to them one quart of whiskey. Shake the bottle, and then let it stand one week. A table spoonful, in water, three times a day, is a dose in cases of debility after fevers.

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## A   T O N I C   I N   J A U N D I C E .

Take of

Wild Cherry Bark, one ounce.

Put it into a quart of cold water, let it sit all night, and then take a wine-glassful three times a day.

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## A N O T H E R .

Take of

Camomile Tops, a handful.  
Water, one pint.

Prepare, and take as above.

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## S O L U T I O N   O F   Q U I N I N E .

*Recipe:* Sulphate Quinine, twenty grains.  
Elixir Vitriol, one drachm.  
Pure Water, two ounces.

**Mix.** A small tea spoonful is a dose for a grown person. It

may be repeated every two hours, when free from fever. The stomach should always be well cleansed before quinine, or any other tonic, is given.

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### PILLS OF QUININE.

*Recipe:* Sulphate of Quinine, twenty grains.  
Flour, a small quantity.

Form twenty pills; one of these may be given every two hours, to cure ague.

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## PLASTERS.

### STRENGTHENING PLASTER.

Take of

Diachalon Plaster, two ounces.  
Good Rosin, one ounce.

Melt them slowly together, and spread on thin leather or linen; warm the plaster a little before you apply it. It will stick well, and you may temper its hardness by adding or diminishing the quantity of rosin.

This plaster may be worn on the back, or breast, for weakness, or around a weak joint.

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### MUSTARD PLASTER.

Take of

Ground Mustard, one part.  
Wheat Flour, two parts.

Mix them together, and wet with warm vinegar.

This plaster may be applied over a pain, or on the throat of infants in the first stage of croup. It cannot be borne long at a time.

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### PLASTER OF HORSERADISH.

Take of

Horseradish Root, scraped fine,  
Corn Meal, — equal quantities.

Mix, and wet with vinegar; spread it on a cloth, and apply it as you would a mustard plaster.

The inside bark of white walnut, scraped fine, and wet with vinegar, will draw a blister.

## P O U L T I C E S .

## HOP POULTICE.

Take of

Hop Blossoms, a handful.

Boil them in a pint of water for ten minutes, and then thicken with wheat bran, leaving the hops in the poultice.

This is a good poultice for pains in the jaws from cold, or painful swellings.

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## A POULTICE FOR WHITE SWELLING.

Take of

Swamp Ash Bark, any quantity.

Burn it to ashes, and drip water through it, till all the strength is out. Take of this lye and vinegar, equal quantities; thicken with wheat bran, and form a poultice; apply this warm, and repeat it frequently.

It is a celebrated remedy for white swelling in the early stage. It will frequently scatter it away.

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## A SOOTHING POULTICE.

Take of

Sage Leaves, rubbed fine,  
Powdered Starch, — equal quantities.  
Sweet Milk, enough to make a poultice.

Apply it warm to the part. This will speedily soothe the pain of a boil or rising under the arm.

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## CLAY POULTICE.

Take of yellow clay, any quantity; vinegar, enough to form it into a poultice. Apply it cold to a strained joint.

It gives very speedy relief, and often cures in one night.

## D I E T E T I C S .

## A DIET DRINK.

Take of

Chany Brier Root, half a pound.  
St. John's Wort, half a pound.  
Life Everlasting, half a pound.

Boil all, in five gallons of water, down to one gallon; strain, and add one quart of spirits. Take a wine glassful two or three times a day.

This, in common language, is a good purifier of the blood. If it should ferment, it will operate on the bowels.

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 ANOTHER DIET DRINK.

Take of

Burdock Root, half a pound.  
Sarsaparilla Root, half a pound.  
Spikenard Root, one fourth of a pound.

Boil them in a gallon of water down to half a gallon; strain, and add of saltpetre one ounce, of spirits one quart.

Take a small wine glassful three times a day. This is a good purifier of the blood and other fluids.

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 TO PURIFY THE BLOOD BY DIET.

If you live on smoked meats, the chyle which is formed from them is thick and yellow, like old cream. If you live on fresh meats, the chyle will be thick and white, like white cream. If you live on milk and bread, the chyle will be thin and white, like milk. If you live on a vegetable diet entirely, the chyle will be clear as water, and sweet.

The chyle makes the blood, and the blood makes the muscles and other solids, by a peculiar modification of vital action. You see, therefore, if you wish to remove everything irritating from the system, that no diet that will produce or form strong or irritating chyle should be taken; and you may often cure yourself of chronic diseases by dieting on vegetables long enough.

## DIET AND DRINK FOR THE SICK.

**OATMEAL TEA.** — Take of oatmeal, a small tea cupful; boiling water, half a gallon. Mix them in a deep pan; let it stand half an hour, and when the meal has settled, strain off the tea.

**BRAN TEA.** — Take new, clean bran, one pint; molasses, one spoonful; boiling water, half a gallon. Mix them well. Cover the vessel close for three hours, and then strain off the tea. This may be drank at pleasure; it is pleasant and cooling.

**FLAX-SEED TEA.** — Take one ounce of clean flax-seed; white sugar, one ounce; lemon juice, two ounces; or lemon acid, (the salt,) one tea spoonful; boiling water, one quart. Put into a pitcher, and let it stand for one hour; then use the liquor. It is a good expectorant in bad coughs or colds.

**CAMOMILE TEA.** — Camomile flowers or tops, one handful; boiling water, half a gallon. Let them stand one hour, and then strain off for use. This is a good drink in consumption or bad cold.

**WINE WHEY.** — New milk, two pints; water, one pint; white wine, one gill. Mix the milk and water in a clean tin vessel, and set it on a clear fire. As soon as the milk and water begin to boil, add the wine gradually. Boil them for fifteen minutes. As fast as the curd collects, take it off with a spoon. If the liquor is not clear, add a little more wine; boil it a few minutes longer, and skim it till it becomes clear. Remove it from the fire, and strain the whey for use. This is nourishing, and gently stimulating; it is good in typhus fever, or any case of great debility.

**VINEGAR WHEY.** — This is made in the same way that wine whey is; only use vinegar instead of wine. If a little butter and spice be added to it, it makes an excellent drink in bad cold.

**TREACLE POSSET.** — Milk, one pint, heated to a simmer; add two spoonfuls of molasses, and stir till it simmers again. It is now fit for use.

**LEMONADE.** — The juice of two lemons; boiling water, one quart; white sugar, two ounces. When they have stood in a pitcher fifteen minutes, it is ready for use. It is cooling and pleasant in fevers.

**ORANGEADE** is made in the same way; only we use oranges instead of lemons. It may be taken for the same purposes as lemonade.



**THE IMPERIAL DRINK.**—Take cream tartar, one drachm; fresh lemon or orange peel, half a drachm; white sugar, one ounce boiling water, one quart. Let them stand in a pitcher ten or twelve minutes; then strain off. This is a pleasant drink in fevers.

**BARLEY WATER.**—Pearl barley, two ounces; water, two quarts. Wash the barley well with some cold water, and then pour on a pint of water. Boil it a few minutes, and throw this water away. Then add a pint and a half of boiling water to the barley, and boil for ten minutes. Let it settle, and strain it off for use. It is a good expectorant, and a light diet when seasoned palatably.

**TOAST WATER.**—Toast slowly a thin piece of bread, till it is perfectly brown, but not burnt. Then place it in a pitcher of cold water, and cover it up. This is nourishing and palatable.

**WATER GRUEL.**—This may be made of oat or corn-meal, — two spoonfuls of meal to a quart of water. The meal should first be mixed with a pint of warm water, so that no lumps remain; then stir it slowly into another pint of boiling water, and simmer it slowly for half an hour. Then add a little salt and a small piece of sweet butter. It is a light and nutritious diet.

**RICE GRUEL** is made in the same way; only use rice meal instead of corn or oat meal.

**RICE MILK.**—One tea cupful of clean rice; water, one pint. Boil it for half an hour, and then add a quart of new milk. Let all simmer over a slow fire till sufficiently done; then add a little sugar and nutmeg.

**PANADO.**—Take of bread, one ounce; mace, one blade; water, one pint. Boil them without stirring, till they mix and turn smooth; then add a little grated nutmeg, a small piece of butter, and sugar enough to make it agreeable. A little wine may be added, when a gentle stimulant is required.

**SAGO.**—Take one table spoonful of sago; water, three gills. Boil them gently, and stir occasionally, till the mixture is smooth and thick. Then add a spoonful or two of wine, and a little nutmeg, and sweeten to the taste.

**ARROW ROOT.**—Take of the powder a large tea spoonful. Mix it in a gill of sweet milk, and pour the mixture into nearly a pint of boiling water, stirring it for a few minutes, when it will be fit for use. A little loaf sugar and nutmeg will make it

palatable. This diet is not good for children with a bowel complaint.

**SIRUP OF TURNIPS.**—Pare and slice the turnip thin, placing brown sugar between every slice. Let them stand a few hours, and the sirup will collect. It is nutritious, and good in coughs, or colds.

**POTATO FLUMMERY.**—Boil one pound of potatoes till they will mash easily; then take off all the rind, mash them fine, and add two ounces of sweet butter and a gill of sweet milk, and salt sufficient to season them. Warm them, and stir and mix them thoroughly. It may be eaten either by itself or with bread.

**BREAD SOUP.**—Take the upper crust of a roll—the drier the better; cut it into pieces, put it into a saucepan with a pint of water, and a piece of butter as large as half an egg; boil them well, and stir and beat them till the bread is perfectly mixed. Season with a little salt, and pour into a bowl. In cases where the stomach does not forbid it, a few spoonfuls of hard cider may be added. This is a light and good diet for the sick.

**BEEF BROTH.**—Take a quarter of a pound of lean beef; water, a pint and a half; salt, sufficient to season it. It should be well skimmed. Then add two blades of mace, and continue the boiling ten minutes longer,—fifteen or twenty minutes in all. Empty it into a basin. This is light and nutritious.

**CHICKEN BROTH.**—Take one half of a tender chicken; skin it, and remove all the fat. Put it into a quart of water, and a suitable quantity of salt. Skim it as long as any scum rises; then add a little mace, and a crust of bread. Three quarters of an hour's boiling in all will complete the whole process. It is a good diet for the sick.

**BOILED CHICKEN.**—Take the chicken as prepared above, and lay one slice of bread and a piece of chicken; and pour over the whole some of the broth. It is to be eaten without anything else with it.

**BREAD PUDDING.**—Take crumbs of bread, half a pound; new milk, three gills. Pour the milk, boiling hot, upon the bread, and let it stand about an hour, covered closely. Add the yolk of two eggs well beaten, a little grated nutmeg, one spoonful of rose water, and a little salt and sugar. Beat the bread well, and mix the whole together with a spoon. Tie it close in a clean linen cloth; place it in boiling water, and let it boil three quarters of an hour. Then remove it to a plate, and pour over it

some melted butter; add a little good wine and sugar, and it is ready to be used.

**BATTER PUDDING.** — Take of flour, six spoonfuls; milk, one pint; salt, half a tea spoonful; beaten ginger and nutmeg, of each, a tea spoonful. When eggs are added, the yolk of three and the white of one should be well beaten, and mixed with the above, with a little melted butter, wine, and sugar, and baked one hour, or until well done. It may be eaten so, or with some mild sauce.

**RICE PUDDING.** — One ounce and a half of ground rice, boiled in a pint of milk till it is pretty thick, stirring it all the time; then pour it into a pan, and then add one quarter of a pound of sweet beef suet, and two ounces of sugar. When it is cold, grate half a nutmeg, and beat up three eggs. Mix all well together, and pour it into a dish first rubbed over with a little butter; then bake it till done.

**BOILED FLOUR.** — Take a pound or two of fine flour; tie it up as tight as possible in a linen cloth; dip it rapidly into cold water, and dredge the outside with flour, till a crust is formed around it, which will prevent the water soaking into it while boiling. It should then be boiled till it becomes a hard mass. A small portion of this may be grated down, and boiled in milk and water to a proper consistence, and sweetened to the taste. A little nutmeg or spice may be added. This forms an excellent diet for children in summer complaints, after the stomach is cleansed.

**BEEF TEA.** — Cut one pound of lean beef into thin slices or shreds, and boil it in a quart of water for twenty minutes, removing the scum as it rises; and, when cold, strain, in which state it resembles a slight infusion of green tea. It is light, and very nutritious.

**MUSTARD WHEY.** — Boil one ounce and a half of ground mustard in a pint of milk and a pint of water, till the curd is entirely separated; then strain through a cloth. This is a pleasant preparation of mustard, and is suitable for persons who have been reduced very low by fever, especially typhus fever. A table cupful may be taken three or four times in twenty-four hours. It is a pleasant diaphoretic cordial.

**ALUM WHEY.** — Boil two drachms of powdered alum in a pint of milk, till it is curdled; then strain out the whey. It is good in doses of two or three ounces, three times a day, in uterine hemorrhage. The curd is good to apply to bruised eyes.

**TO MULL PORT WINE.**—Boil a small portion of spice in water, till the flavor is imparted to the water. Then add as much wine as you have water, some sugar and nutmeg; boil it together, and serve it with toast.

**ANOTHER PREPARATION.**—Boil some allspice, or a bit of cinnamon, and some grated nutmeg, a few minutes, in half a pint of water; then add a pint of wine; add sugar to your taste; beat it up, and it will be ready for use.

**TO MULL WHITE WINE.**—Boil a pint of good wine with a little allspice; beat the yolk of an egg with a little sugar, and add to it the wine while boiling.

**LEMON WATER.**—Put two slices of lemon, thinly pared, into a teapot, a small piece of the peel, and a little white sugar. Pour in a pint of boiling water, and stop it close two hours.

**APPLE WATER.**—Cut two large apples in slices, and pour boiling water on them; or they may be roasted. Strain, after two or three hours' standing, and sweeten lightly.



*Blue Flag.*

See page 863



*Wintergreen, or Pipsissaway.*

See page 845

## A P P E N D I X.

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### FALLING OF THE WOMB.

THIS disease is familiarly known by the above name. It is known to medical writers by the appellation, *prolapsus uteri*, *decensus uteri*, &c.; the latter term being used to express the slightest form of the disease. It is sometimes called by the ladies, simply, *a bearing down*. In the healthy, unimpregnated state of these parts, the uterus is situated nearly in the centre of the cavity of the pelvis; the distance of the mouth of the womb, or *os uteri*, from the external *os*, or mouth of the vagina, being about four inches. The mouth of the womb, or *os uteri*, is not a continuation of the same line with the vagina, but it terminates in the vagina by projecting into it, the outer surface of this projection being covered by a portion of the inner membrane of the vagina tightly spread over it. In the generality of women, the distance from the opening of the *os uteri*, to the part where the inner membrane of the vagina begins to be reflected over it, is nearly an inch. This distance will be increased when the womb has fallen to any considerable degree; and this becomes one of the signs (known by examination) of the misplacement of the womb downwards. Every degree of falling of the womb may be met with; from that case where the *os uteri* descends a little lower than its natural position, to that in which the womb projects through the external parts, dragging with it the vagina, and forming a large tumor between the thighs of the woman, sometimes



equal in size to a moderate-sized melon. This will cause an alteration in the relative situation of the parts within the pelvis, and of the abdominal viscera, with regard to each other, and also the containing parts, as the parietes of the abdomen and bones of the pelvis. The bladder, instead of being contained in the pelvis, falls down into the external tumor, dragging with it the mouth of the urethra; so that, in order to introduce a catheter into the bladder, the point of the instrument must be turned towards the knees of the woman; for, being placed in the usual manner in which that instrument is introduced, it will enter the passage, but cannot be made to pass into the bladder in that direction. The rectum, or lower bowel, instead of taking the sweep of the *sacrum*, first dips down to the posterior part of the tumor, and afterwards ascends into the pelvis. The fallopian tubes and ovaria will all be dragged down with the uterus, and the centre of the tumor will be filled up by the small intestines, which hang down into it; the mesentery and fat of the bowels being stretched. It requires many months, or even years, for the uterus to make a descent to this degree; for when the uterus has descended so far as to rest upon the perineum, there it not unfrequently remains, resting upon it, as upon a shelf, the violence of the symptoms abating. The parts which suspended the uterus above, although much lengthened, are now no longer upon the stretch. The number and violence of the symptoms are by no means proportioned to the degree of the descent of the uterus; for, when it has descended but little, the round ligaments are put upon the stretch, and the symptoms which attend the slighter degrees of this descent also attend it now. When the womb falls out, or passes through the vagina and labia, and comes into the world, much inconvenience is felt by the woman, in consequence of its situation between the thighs, which obliges her to walk with her feet far apart, in order to prevent pressure upon the tumor. The external surface of the tumor presents nearly an equal surface; for, as the uterus descends, the folds of the vagina are obliterated, except at the upper part, where it joins the body, and even there they are lost when the bladder is full; but in proportion as it is emptied, the *ruge*, or folds, appear again. The vagina, being exposed to the action of the air upon it, loses its florid color, and gradually acquires that of the skin of the body. It also loses its peculiar sensibility, which it possesses in its natural state and position. The front part of the abdomen becomes flat, from the

bowels having fallen down into the pelvis. The bowels having fallen down and taken the place of the uterus, and filled the vagina, they become liable to pressure in a greater degree than when they maintained their natural situation in the cavity of the abdomen. Inflammation is sometimes the effect of this pressure. Coagulable lymph is, in such cases, thrown out, which unites the parts; and if either the omentum or a portion of the intestines be thus connected with the lower part of the tumor, pain will be felt in those situations of the belly from which such parts proceed. If the fat over the stomach should adhere to the fundus of the uterus, pain will be felt in the stomach, and become the source of much distress.

#### CAUSES OF THIS DISEASE.

The immediate causes of this disease are, *first*, relaxation of the broad and round ligaments above, which hold up the uterus; and *second*, a want of due tone or strength in the vagina below. By the first, the uterus is permitted to fall; by the second, it is allowed to be received into the vagina. Weakness of the general system will lay the foundation for this complaint, by relaxing the broad and round ligaments of the womb; and, therefore, after protracted disease, which has diminished the patient's strength, we frequently find this disease occurring. Profuse hemorrhage, from any part of the body, by inducing great debility, may lay the foundation for this disease; but the most common cause for this troublesome disease is the long and continued erect posture of the body, at an early period after delivery, and, in some cases, after abortion, or miscarriage. To this cause, or similar causes, a majority of the cases in married women are to be attributed; for, at this time, not only the immediate causes of the disease are present, all the ligaments relaxed and elongated, and the vagina relaxed, but the uterus weighs eight or ten times as much as it does before impregnation, or in its natural state; therefore, its own weight naturally carries it down. As sitting up too much in an erect posture, early after delivery, is very injurious, so is too long confinement on a soft feather bed, where much heat is accumulated. This produces great relaxation, and lays the foundation of mischief. It is much better to lay on the outside of the bed, or on a sofa, after the first eight or ten days. A mattress is greatly preferable to feathers. In every case, the horizontal position is greatly to be preferred to the chair. This posture should be preserved till the

uterus has nearly regained its natural position, which requires about four weeks after delivery. Early rising and exercise, by those in the lower ranks of life, is the reason why they are so much more liable to this disease than those who have the means and opportunity of taking care of themselves. The poor are often great sufferers from this complaint, even when they do not complain; but their sufferings are frequently unknown, and the want of means prevents them from obtaining relief. Those who are liable to a violent cough during their confinement, are very liable to this complaint. In a word, anything that will produce great debility of those parts, in connection with the general system, will lay the foundation for this disease, either in the married or single female.

#### SYMPTOMS OF THIS DISEASE.

These are partly from mechanical causes, and partly from sympathy. At the commencement of this disease, the woman complains of pain in the back, and this symptom sometimes continues for a great length of time without any other; but, as the disease progresses, pain is felt in the groins, with a sensation of dragging, or bearing down, which pain points towards the labia, and often terminates there. There is a sense of fullness in the parts, and now a transparent discharge takes place from the vagina. As the disease progresses the sensation of pressure increases, till it seems as if the weight would press through to the world. As soon as the patient lies down, and elevates her knees, these symptoms subside, and she feels easy so long as she retains this position; but as soon as she rises, and walks a few steps, all the above symptoms return, and she is compelled to lie down again, or suffer very much. A difficulty in making water is frequently an attendant of this disease, and it continues more or less till she is cured. The water in this case is high colored, and but little is discharged at a time; there is an increased inclination to pass it; it is sometimes hot, almost scalding the parts. These symptoms are all aggravated by the erect posture; indeed, they very often subside entirely when she lies down, especially if her bowels are not constipated. The sympathy between the uterus, stomach, and bowels, is very great. The appetite becomes very irregular, or is almost entirely lost; the stomach and bowels lose their tone, and there is great distension of the abdomen, from air generated therein; this air may very frequently be heard moving from one part to another; the spirits flag; every employment becomes irksome, and life itself is

considered as scarcely desirable; the diaphragm is sometimes affected by spasms; and hiccough is sometimes produced. There is another symptom which is often an attendant of this disease: that is, a pain extending from the short ribs on the left side quite down to the groin. When there are but few of the other symptoms present, this pain is very annoying to the patient, and not a little perplexing to the physician, unless he understands the cause of it. Hundreds of blisters have been drawn, and gallons of antispasmodics given for its cure, and no relief obtained, when the whole cause is a falling of the womb. All that has been said above, relates to the falling of the womb while it yet remains in the body. But it sometimes falls entirely into the world; then it is characterized most certainly by the mouth of the womb being found at its lower point; indeed, this is the only absolutely certain evidence of the tumor's being the womb. When this is the case, the vagina, of course, is turned inside out, and its surface ulcerates in spots, and suppurates freely; but the sores appear to be healthy. When these ulcers do appear, the *os uteri* is almost sure to be the seat of one of them. Slight procidentia, or falling of the womb, can only be detected by an examination, and then only by a good judge of this disease. The tumor in the vagina not being in its proper position, characterizes this disease in its slightest form. A tumor pressed into the world with an orifice in its lower end, characterizes it in its worst form. All the different degrees between these two positions may mark the degrees of mildness or intensity of this disease. All the variations from a glairy mucus to a thick yellow or greenish discharge, and even to the discharge of blood combined, will mark the differences in the discharges attending this disease. The womb should be examined while the patient is standing, as well as lying down.

#### REMEDIES FOR A CURE.

If nothing were done for the relief of this disease, the patient would die of weakness induced by the large discharges, the disordered state of the stomach, and the local as well as general irritation of the system. Few diseases admit of more certain relief, in the early stage, than the falling of the womb; but the remedies should be applied as soon as the disease is discovered. If a woman having this disease should again become pregnant, and will submit to being confined in a horizontal position for some five or six weeks after her delivery, keep her bowels open, and take



some tonic medicines, she will be cured. But she may not become pregnant again, or she may never have been pregnant, or may be a maid, and never marry: then we must resort to the means of art for a cure. In all cases of falling of the womb, either in the married or single state, the cause is to be found mainly in the relaxation and elongation of the ligaments of the womb, from some cause or other, and all the other symptoms and effects are secondary. From this view of the case, we see plainly that the remedies must be in part such as are calculated to give strength to those weakened organs, as well as to remove secondary symptoms and effects. In every case these objects are never to be lost sight of: to strengthen the weak parts, and remove the weight, and relieve the symptoms and effects of the descended uterus. But, as is the case in many instances, the powers of the constitution are greatly weakened; and as we can give strength to particular parts by giving strength to the whole system, general as well as local remedies must be used. The remedies are found in cold applications, combined with astringents and tonics. Cold, applied to the surface of the body, produces an increase of the tone of the body, by increasing the permanent contraction of the fibres of the body. Cold produces contraction of the parts in the immediate neighborhood of its application, in a greater degree than in those at a greater distance. If a man dips one hand in cold water, the surface shrinks and the blood vessels disappear, and the hand becomes pale, while the other remains red and the blood vessels full. But we must recollect that the application of cold to external parts, while it diminishes the blood there, sends it to some other organs, and fills the vessels in those parts more full; but if the cold be applied near the part in which we wish to diminish the blood, by producing a contraction of the vessels of that part, we see the effect almost instantaneously; as, for instance, apply ice to the loins, or abdomen, and we relieve uterine hemorrhage, by causing the blood vessels in the womb to contract, and shut out a portion of their blood. On the contrary, whatever will produce an increase of blood to any one organ or part of the body, will produce an increased secretion from that part. These facts are too obvious to be denied. On the other hand, whatever will produce a diminution of blood to any part, will cause a diminution of secretion by that part. Predicated upon these facts, and experience bears me out, cold applications to the back, abdomen, and even to the vagina and womb, are well calculated to take off inflammation, and



diminish the secretion of those parts. Cold bathing, then, to the loins, belly, and genital organs, is a good remedy in this disease. The parts should be frequently cleansed with cold water; the loins and abdomen sponged with cold water; the vagina should be washed out with a womb syringe, using cool water and castile soap, two or three times a day, till the inflammation and soreness is removed from the vagina and womb; then the womb should be raised up by the finger, and placed as nearly in its proper position as possible. Then astringent washes should be used, such as the following:

*Recipe:* Pulverized Alum, half an ounce.  
White Vitriol, two drachms.

Mix them well together, and dissolve them in a quart of rain or river water. Inject of this solution freely into the vagina, three times a day, for a week or two; then use a strong decoction of red oak bark for a week or two. Be careful to place the womb up with the finger every day or two; all the time observe a recumbent posture, as much as possible, with the hips a little elevated; at the same time keep the bowels open, with the following pill:

*Recipe:* Aloes Sorotime, twenty grains.  
Pulverized Rhubarb, twenty grains.  
Castile Soap, twenty grains.  
Salts of Tartar, twenty grains.

Balsam of Fir, sufficient to make a pill mass form into twenty-four pills.

Take from two to four of these every night, or just as many as will operate once or twice the next morning. Also, take the following medicine during the day:

*Recipe:* Citrated Aromatic Wine of Iron, four ounces.

Take a tea spoonful of these drops in water before each meal; or,

*Recipe:* Huxham's Tincture, four ounces.

Take a tea spoonful of these drops, as above, with ten drops of elixir of vitriol in each portion. Here I would remark, that almost all the mineral and all the vegetable tonics may be brought into requisition in the cure of this disease. (See *Tonics*, in the *Materia Medica*.) Sleep on a mattrass, and not feathers, during the cure. Use a diet that is calculated to strengthen the system. Seven cases in ten may be cured in this way, but should they fail, or the patient not follow up the directions sufficiently, then she must submit to the use of the pessary. Of these there are a great variety, and they have been made of all sorts of materials, from the sponge to the ivory and the gold. The ivory, or gold-plated, is

the best, and of all the shapes advised, the flat, concave, globular edged pessary is the best, and generally the medium size is the best size; but this must be regulated by the case, and the circumstances and size of the parts. It should be oiled and introduced edgewise, passing it downwards and inwards till it passes fairly within the vagina, having previously raised the womb with your finger. You place the concave surface over the *os uteri*, and bring the hole in the centre of the pessary immediately over the mouth of the womb, with the convex surface immediately downwards. This may be worn, if it be plated with gold, or is of pure ivory, for two or three months, or even for six months, without removing it; but should pain or irritation come on, it must be removed and cleansed, the parts washed till the tenderness is removed, and the pessary reapplied. Generally, the womb may be restored to its proper place by the use of the pessary, properly managed, in from six to twelve months; but I would never use one unless all other remedies failed. I need not say that great care should be taken ever after to prevent a recurrence of the disease, by avoiding all the debilitating and exciting causes, such as fatigue; violent exertions, such as lifting, running, leaping, dancing; or relaxing and debilitating indulgences.

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### ST. VITUS' DANCE.

YOUNG persons are more liable to this disease than the aged, and girls are more frequently attacked by it than boys. In its first onset, the symptoms are slight, and are only noticed occasionally. It makes its first appearance by twitchings in the fingers and toes, and some slight unnatural motions of the head, and drawings and contortions of the face. These symptoms are gradually augmented, till there are very extensive flexions, extensions, and rotations of the extremities, and finally the motions become perpetual, and the eyes roll in every direction. I have often stood and observed these motions, and could not compare them to anything more analogous than the twirlings and contortions of a snake, when its head has been suddenly mashed. The voice is materially affected, so that articulation becomes quite difficult, and swallowing is performed with great difficulty and exertion. The patient now

cannot walk, nor stand, nor lie still; but, in every instance, the voluntary motions are performed contrary to the efforts of the will. When he makes an effort to go forward, and raises the foot, instead of advancing, the foot is thrown violently to one side, or directly backwards; and if the patient lie down on the bed, he will either roll off, or, by a sudden and convulsive motion, in an instant almost, his head is placed where his feet should lie, and his whole position on the bed is changed. When the disease progresses thus far, it requires two or three persons to feed the patient; one to hold the hands, another the body and head, while a third puts the food into the mouth with a spoon. Fear, joy, grief, or sudden surprise, will always increase the agitation for a short time. These motions are very partially under the power of the will; they may for a moment be controlled to a degree, but they soon return. Persons affected with St. Vitus' dance walk quickly, better than they do slowly, and sometimes they cannot walk at all; but can run, with their feet too wide apart. It is surprising with what force they will carry a person along, who attempts to hold them when they start to run. It is worthy of remark, that, during sound sleep, all movements are suspended, unless in very extreme cases; then some motions, rather like a *subsultus tendineum*, will be observed, and sometimes, instead of these, a convulsive hiccough when awake. There are discharges of wind from the bowels when asleep. If you hold one part, the others are the more agitated. Generally, one side is more affected than the other; but this is a common occurrence in all convulsive diseases, and, indeed, in diseases of sense as well as motion. In St. Vitus' dance, the convulsive twitchings frequently change from one side to the other; to-day one side is more affected, and to-morrow it is better, and the other side is worse. The arms are generally more affected than the legs, and both are rarely affected to the same degree at the same time. After the disease has continued for some time, the countenance becomes fatuitous, and, though the mind seems to be but little affected, yet the patient becomes childish. When the motions are very rapid, the pulse is very quick; and sometimes there is heat and pain in the head, with giddiness and drowsiness. Sometimes the patient screams out, and in some cases real epileptic fits occur, occasionally, in the progress of the disease. The abdomen is frequently distended and hard, but in many cases we find nothing wrong there; and occasionally the bowels are obstinately costive. The urine is generally secreted in its usual quantity and quality,

though sometimes it varies from the standard of health, and is scanty and high colored, or copious and pale. This disease may last for weeks, months, years, or even for life. It rarely, if ever, ceases spontaneously; but in all cases may be cured, when it is not complicated with some other disease, such as epilepsy, apoplexy, &c. It is not unfrequently complicated with hysteria. If it is in a local form—that is, in one leg, or in one arm—it may twitch occasionally for life, or the head may be projected forward, and twitch occasionally. It would appear that this disease runs in families. We have seen several members of the same family, and family connections, who laboured under its influence. It is frequently observed that, where one member has St. Vitus' dance, another member of the family will have some other nervous affection. This disease is more difficult to cure in adults than in children. It is often produced by worms in children, and in adults also, and by the suppression of the catamenia in young women. This disease rarely terminates fatally, without a complication with some other disease. The usual period of its occurrence, according to my observation, is from the age of five, or six, to twenty years. About three girls to one boy are afflicted with it. In all cases that have come under my notice, and they have not been a few, I have found the secreting organs to be in an unhealthy condition. I have known several cases brought on by overloading the stomach and bowels with green and indigestible fruit, such as apples and peaches.

## TREATMENT.

In all cases, I commence the cure by giving such medicines as are calculated to thoroughly cleanse the bowels, and produce a healthy state of the secreting organs. If the patient is full of blood, I bleed from the arm, or apply leeches to the temples, or behind the ears, and draw blood freely. Then, if the stomach be loaded, give an emetic:

*Recipe:* Pulv. Ipecac., ten grains.  
Tartar Emetic, three grains.

Mix. For an adult, dissolve in nine table spoonsful of warm water; give three first, and one every fifteen minutes, till the patient pukes freely. Then work it off with warm water, in the usual way. The next day I give the following purgative:

*Recipe:* Calomel, fifteen grains.  
Pulv. Rhubarb, ten grains.  
Aloes Socotrine, ten grains.

Form into six pills ; give three first, and the others in two hours ; work them off with gruel without salt in it. After this, the bowels should be kept open, or rather purged gently, every day, with some mild purgative, such as senna and manna, or Rochelle salts, or Lee's vegetable pills. (See *Materia Medica*.) And the following tonic may be given :

*Recipe* : Susqui per Oxide of Iron, twenty grains.

Dissolve in one ounce of pure water. A tea spoonful may be given in molasses three times a day ; or citrated aromatic wine of iron may be given in the same way, and in similar doses. The sulphate of zinc may be given to an adult, by commencing with two grain doses, three times a day, and gradually increasing the dose to twenty grains, three times a day. All the vegetable tonics have been brought into requisition, in their turn, in the cure of this disease ; but none of them are equal to the preparations of iron. The precipitated carbonate of iron, in doses of twenty grains, three times a day, I have found to answer a good purpose. All the anti-spasmodics, such as asafoetida, musk, castor, opium, &c., have been given, with but little effect, except the opiate, at bed time, to procure rest, which is good. The bowels should be kept open ; the patient as tranquil as possible ; the medicines persevered in, and the dose proportioned according to the age of the patient ; and all trashy diet carefully abstained from. The diet should be light and easy to digest. The exercise should be proportioned according to the strength and age of the patient, and the ability to perform it without fatigue. From two weeks, to three months, are generally required to perform a cure. I should not omit to say, that the oil of turpentine has been used with success in the cure of this disease ; the dose is from twenty drops to a tea spoonful, in sugar, three times a day. The nitrate of silver is highly recommended by some authors. I do not like the remedy, and have never seen a case that I could not cure without it, though it is a valuable remedy in epilepsy ; yet I think it not pathologically adapted to the cure of this disease, and, therefore, have not used it in any case. If it is used, the dose is from the sixth of a grain to half a grain, three times a day, according to the age of the patient, given with a very small portion of opium, in sugar. It should not be continued more than a week in succession ; then omitted for a week, and free purgatives given before it is resumed.



## SPASMODIC CHOLERA.

IN addition to what I have said in the body of this work on the treatment of cholera, after having closely examined everything that has been written on the subject, and making further and close observations upon its nature, pathology, &c., I have added to my former treatment the following: (After giving as before prescribed, in the first attack, before collapse comes on, viz:—

*Recipe:* Calomel, twenty grains.  
Pulv. Gum Camphor, six grains.  
Pulv. Opium, two grains.

Mix, and divide into three powders; give one every time the patient purges, till all are taken; if they do not check the discharges, repeat the number. If the extremities are cold, apply hot dry bricks and bottles of hot water to the feet and legs, and wrap the patient in hot dry blankets, keeping him as still as possible. I have found that the above proportions are exactly right. More opium, or camphor, or calomel, is not necessary in the first stage; but what I conceive to be equally important, is the drink.") I give no teas or cold liquids whatever. I toast some corn meal very brown, and make a strong coffee of it, and require the patient to drink this, and nothing else, till the reaction takes place. If the stage of collapse comes on, I continue this drink, but change the form of the medicine. I give the following:

*Recipe:* Calomel, sixty grains.  
Pulv. Mace, three grains.

Mix them well, and divide into twelve papers; give one, in a little sugar, every fifteen minutes. At the same time give the following also:

*Recipe:* Thick Mucilage Gum Arabic, six drachms.  
Chloroform, one drachm.  
Laudanum, one drachm.

Mix. If the collapse is complete, I give a tea spoonful first, in a little of the corn meal coffee, and then repeat, twenty-five drops every fifteen minutes; that is, between the doses of calomel and mace. This leaves only seven minutes and a half between these medicines. I continue these medicines till the patient is perfectly warm, the cramps all removed, and the pulse full. From two to six hours is sufficient to bring any case that I have had this summer out of collapse. I have tried it in

twelve cases of collapse (complete), and have lost none. As soon as the warmth is restored, and the pulse full, (the cramps subside long before this,) I cease to give any more of either of these medicines or the drink. I now let my patient rest, without medicine, and give him cool drinks, but allow him to swallow no ice. If the reaction runs high, and there is any likelihood of a strong determination to the brain, I leech the temples and behind the ears, and keep the head wet, in cold or ice water. If the calomel should not operate upon the bowels in eight or ten hours, I either give an injection, or a tea spoonful of the fluid extract of rhubarb, and repeat, every three or four hours, till it operates. The first operation is, of course, like the last rice water; but the next will be dark, and presently yellow bile will appear; then all you have to do is to keep the bowels gently open; perhaps to cure a slight salivation, and perhaps not; regulate the diet for a week, and your patient will be well. I have found that it is better to keep the bowels open by injections, than to give medicine. In one case, where the patient was so far gone in collapse as not to know anything, I did not allow him, after he was restored by the above treatment, to have an operation from his bowels for sixty hours, and then moved them by an injection. He recovered, and in ten days was walking out. In all cases of cholera, after a collapse, the patient should not take any solid food for a week. Gruel, tea, beef tea, chicken broth, milk and water, a little wine and water, &c., should constitute the diet. Solid food, taken too soon, will be sure to produce a bad effect; either bring on fever or a relapse. If the extremities swell, after recovery from a severe collapse, as they frequently do, some of the preparations of iron, or the vegetable tonics, should be given. As above stated, I have this summer cured some twelve cases of collapse by the above treatment, and somewhere near fifty by the first prescription, in the stage before the collapse. I have not lost one case of cholera during this epidemic. (1850.)

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## HYGIENE.

HYGIENE is the art of preserving health. Upon this subject we have the whole human family arrayed; not in one general

phalanx, but in confused and discordant squads, some pursuing one course, and some another ; but every one ready to give advice, and but few ready to receive it. But, above all other classes of the human family, the divine is the most prompt to advise, and the hearer is most ready to assent to, and take his advice ; perhaps because the community generally are willing to award to him the boon of an honest intention and a pure heart. This should, indeed, be the fact, if he were qualified to give such advice. Why is it that those clerical gentlemen have such an itching for dabbling in medicine, either by volunteering their own services, or by avouching to all kind of remedies, by all kind of quacks, especially if those quacks quote a little Scripture, or affect the prayerful ! From the ranks of our clerical brethren come the foremost to give their certificates in favor of the treatment, or the remedy, whether it be the musty extravagance of homœopathy, with its impossible doses, or Pease's cough candy. I wonder that it has never occurred to them, that excessive credulity, in such important matters as the health and lives of their fellow-creatures, is anything but a favorable commentary on their own religious creed. The sceptic may ask, with a sneer, whether they have taken no more pains to ascertain the strength of their theological, than they have done to test the accuracy of their medical doctrines ? Empiricism in one direction, induces violent suspicions that its possessor has an inkling for its exhibition in other directions. Injustice may be done to the clerical amateur in quackery by this supposition, but most certainly the imputation is of his own creating ; and if both he and his cloth generally suffer in public estimation from this cause, he has himself only to blame for it. That these remarks are well founded, we see, unfortunately, too many proofs. Personally, it is my good fortune to hold acquaintance and friendly intercourse with the clerical gentlemen of different persuasions, whose medical ethics require no reform, and whose opinions, were they to be publicly expressed, would, I have no doubt, be adverse to false pretensions in any form ; whether in the guise of Mormonism or Millerism, with which their own profession is every now and then assailed, or homœopathy, or Graefenburg company's wholesale manufactures, etc. But I am ready to meet my clerical brethren on middle ground, and in so doing, we would point out the subjects of study on which we shall be able to meet on this middle ground, and interchange views and suggestions, profitable alike to both parties, and profitable to the public at large. My reference is to

physiology, or a knowledge of the healthy functions of the human body, and to hygiene, or an acquaintance with the nature and operation of agents by which, in succession or alternation, these functions are maintained and variously modified in their manifestations. These studies involve a consideration of man's mixed nature—the physical, the moral, and the intellectual—and suggest important hints, even if they do not indicate absolute guides for an improved education, and a more fruitful didactic instruction, whether the teachers be professors in a college, or clergymen in the pulpit. The physician, whose views do not extend beyond the mere materialism of man and his functions; and the divine, or theologian, who directs his advice to a purely spiritual being; are equally wide of the mark, equally removed from an appreciation of human nature, and equally ignorant of the manner in which it has pleased the Creator to fashion man. For, while both the physician and the divine admit the compound nature of man, the former is perhaps too prone to lay undue stress on the purely physical causes modifying this nature, as the latter is most likely, too ready to attribute an undue share to spiritual control. If, in place of being thrown, as they now and then are, into antagonistic positions, owing to a hasty assumption, by each, of the dogmatic ethics of the other, they were to start from common and mutually admitted postulates, the result would be more creditable to medical science on the one hand, and Christianity on the other; and both might harmonize in doing much good to man. The works of *Hippocrates*, *Celsus*, *Galen*, *Haller*, *Zimmerman*, the two *Cheyne*s, *Fuller*, and *Paries*, in the medical, as well as those of *Tertullian*, *Lactantius*, *St. Augustine*, *Jeremy Taylor*, *Paley*, and *Butler*, in the theologian's library, might be selected as text books in common, for furnishing abundant apposite knowledge to both parties. This could be done without the clerical student deeming it necessary to learn the practice of physic, from the first class of these writers; or the student of medicine puzzling himself with questions of controversial divinity, that he may meet with in the second class. All the great teachers of antiquity, especially those who legislated for their fellow-men, were well acquainted with the principles of hygiene, the practice of which was made a religious duty. With the hygienic institutions of *Moses*, in Deuteronomy, and in Leviticus especially, all reading men are familiar. Those taught in the books of *Solomon*, though with less solemnity of inculcation than those of *Moses*, still indicate a nice



appreciation of the influence of hygienic agents, as in the contrasted pictures of plain and simple living, and of the penalties incurred by luxurious and debasing indulgences. What admirable lessons of temperance and chastity are contained in the twenty-third and thirty-first chapters of *Proverbs*. Can there be more impressive images of the sorrow and ruin, and yet apathy, of the sufferer from the indulgence in wine, than in the last seven verses of the twenty-third chapter, beginning: "Who hath woe? who hath sorrow?" &c. More could not be said in favor of regular exercise procuring sound sleep, and of indolence being punished by wakefulness, than in this single verse: "The sleep of a laboring man is sweet, whether he eat little or much: but the abundance of the rich will not suffer him to sleep." *Ecclesiastes* v. 12. These few words are equal to a long homily, for inculcating contentedness with one's lot, be it ever so humble. The influence of the passions on the health is well pictured in the following verses: "A merry heart doeth good like a medicine: but a broken spirit drieth the bones." *Proverbs* xvii. 22. "A sound heart is the life of the flesh: but envy the rottenness of the bones." *Proverbs* xiv. 30. "As cold water to a thirsty soul, so is good news from a far country." Again: "A merry heart maketh a cheerful countenance: but by sorrow of the heart the spirit is broken." "All the days of the afflicted are evil: but he that is of a merry heart, hath a continual feast." The purifying influence of Christianity, in a hygienic point of view, merits not only the careful study of the physician, but more emphatic and frequent mention than it customarily receives in pulpit teachings and written sermons. How well does *St. Paul* describe man's double nature, the animal and the spiritual, and the struggle between the flesh and the spirit. He teaches, in a few words, how direct retribution, in their bodily suffering, is measured out to those who yield to sinful indulgences, when he describes the wrong-doer as one who sinneth against his own body. Much more instructive than any doctrine of abstract spiritualism, is that physiological and noble view which the Apostle takes of the human body, when he calls it "The Temple of the Holy Spirit, which is in us; and which is God's, and not our own;" we are left, clearly, not to infer, but to see, we have no right to abuse it. And by another figure, he speaks of the body as a vessel, to be possessed in sanctification and honor. Tertullian, in denouncing the vices of Paganism, and the vanities of personal decoration, the abuse



of perfumes, &c., and visiting the theatre, showed, that not only the morals, but the health suffered by these practices. Still more celebrated for his knowledge of medicine, was the *Platonic Clement*, of Alexandria. He used to cite *Hyppocrates*, and *Galen*, in terms of great admiration, in the second part of his *Pedagogue*, which is purely hygienic. The best features in Islamism, are the hygienic precepts inculcated by *Mohammed*, in the Koran, and chiefly those relating to abstinence from intoxicating drinks, gross meats, and the regular use of personal ablutions. But, I must not forget, that I am only writing a chapter, and not a treatise on Hygiene. As no animal can live without water, in some form, we conclude, that it is the most important article in sustaining animal life. If we turn our attention to ancient authors, on the subject of beverage, we shall find them, without a dissenting voice, all to agree on the one article—water—pure water—as the only safe and healthy beverage for man, or animals. If we trace the line of Hygienic descent, from the pens of all the philosophers, both ancient and modern, we shall find, without exception, that water is declared to be the only safe drink for man. It is one of the largest components of the blood. It is a universal febrifuge, it keeps the system cool, the brain clear, the mind unclouded, the intellect active; and all the secreting organs, under its influence, perform their functions in a healthy manner. The advocates for alcoholic drinks, are wont to say, mix a little wine, or spirits, with your water, to prevent it from hurting you. Let me say, to such, that there is not one particle of nourishment in alcohol. I care not in what form you may find it; it is a potent poison; and, although it may be slow in some instances, it is always sure to perform its work, if its use be persisted in. The importance of water to animal and vegetable life, must be manifest to all men. Water, considered in its physiological relations, is still, emphatically, one of the elements as described by the ancient philosophers. It makes up the chief bulk of all animal, and vegetable bodies; it gives the necessary fluidity to the former, and sap to the latter, without which neither could flow, nor be distributed to the several tissues and organs, of which water is the largest constituent. Water is diffused through the atmosphere, in the form of vapour, and renders the air fit for respiration. Air, deprived of all humidity, would cause a rapid and exhausting evaporation from the skin and lungs, and reduce the being to an extreme state of exhaustion, if not to death. As a proof of it, see the large proportion of water entering

into the composition of the human body. I may mention a fact, stated by *Bluminbach*, namely, that “a perfectly dry mummy of an adult Guanche, (one of the original inhabitants of Tenerieffe,) with all the muscles and visera, did not exceed seven pounds and a half in weight.” Not only does the blood contain four-fifths of its weight in water, but even the parts of the body termed solids, that is, the mass of flesh, of which animals consist, contain, in reality, scarcely one-fourth of solid matter; the remainder being water. Bone itself, and cartilage, in still greater proportion, contain water as a necessary constituent. Again: water enters largely into the composition of all substances used for food. Take a familiar example, the potato; this is composed of from seventy to eighty parts of water. That portion of animal matter used for food, will show an equal proportion of water. Water is indispensable to the process of nutrition, and digestion. Digestion cannot be carried on in any of its processes, without a large proportion of it. Without water, the food we take could not be reduced to chyme; nor could the chyme furnish chyle; nor the chyle become blood. Water is indispensably necessary, in order that the balance of the living functions be preserved, and life sustained. Thirst can only be allayed by water, or those substances containing a sufficient amount of water for that purpose. When man is left to the dictates of the principle of his nature, to select the article best calculated to sustain his frame, he flies to water. Next to the nutritive fluid furnished by the maternal bosom, water is the one taken by the infant, with avidity; and if left to his unbiased taste, would ever be so taken by the adult. And even he who, in his midnight revel, drinks deep into the intoxicating bowl, will, on the following morning, intreat for, and grasp eagerly, the full pitcher of cold water, which only a few hours before he had so insolently derided. Both the principle of his animal nature, and his recovered reason, now suggest, and even demand, the only and proper beverage for them. And but for the blighting curse of imitation, and evil example, their joint influence would ever guide him right. When we say, water is the only suitable drink for man’s daily use, we are fully sustained by the facts in the case. As a proof, that the God of nature designed water to be of universal use, it is found in all climates, and habitable regions of the earth; and providence has no where offered, in fountain, river, stream, lake, or well, any liquid as a substitute for water. It is, therefore, designed as a universal beverage, as it is universally found

where either man or beast can live on this globe. When disease lays hold of our mortal bodies, water is the only menstruum by which medicinal substances are carried into the blood; and even when they are refused an entrance, it readily finds its way, and not seldom accomplishes the cure, for which those drugs are lauded.

How different is alcohol. If it is the menstruum of medicinal substances, it soon abandons them, and can neither obtain for them entrance, nor find its own way into the blood; nor can it ever exercise its influence upon the nervous system, till, by repeated goadings and depraved influences, it finally finds its way into the blood vessels. But then, alas! it soon shows its mark; the face bloats, the limbs stiffen, carbuncles appear, the vital organs are diseased, and the fangs of the agent of hell soon tears the vital casket, and lets loose the spark of life, while it takes its subject to a disgraced, and untimely grave. Oh! spirit and agent of the power of darkness! thou shouldst be deprecated by all rational beings, and irrational brutes—the more rational cannot be deluded by it a second time. Alcohol does not form a constituent part of any tissue, or of any fluid in the healthy body: it retards, in place of aiding those series of changes which the aliment undergoes, before it is converted into blood. It prevents man, in all cases, from fulfilling the high destiny for which he was created. On the contrary, pure water is always exhilarating; it aids digestion, and is in itself nutritious. Perhaps we have said enough on water, simply as a beverage, though much more might be said on the subject, especially if we would take a full physiological view of it. For what we have said, we can confidently appeal, for support, to all the scientific physicians, and philosophers, from *Hippocrates*, down to the present day. Greek, Roman, German, French, English, and American—all—all will sustain me.

While we are on the subject of the Hygienic properties of water, we shall say some thing concerning its external use in baths, ablution, &c. Bathing may, with a great deal of propriety, be regarded as a practice; not less congenial with our feelings of bodily comfort, than conducive to vigorous health. We cannot doubt its antiquity, when we see it resorted to in every stage of society, from the wandering savage of the woods, to the polished inhabitant of the city. The same instinctive impulse by which, during the oppressive heats of summer, man and animals are led to seek the shade, and inhale with eagerness the cool air, would also prompt them to plunge into the nearest stream, as an additional

means of refreshment and invigoration. Of the antiquity of bathing, no one who has any pretensions to a knowledge of the manners and customs of the ancients, will presume to deny. In the best description of ancient manners, we meet with accounts of bathing in rivers; as when the daughter of *Pharaoh*, and her attendant maidens, went down to the Nile; and *Nausicaa*, and her companions indulged in similar enjoyments, in the stream near her royal father's residence. Domestic baths, suggested by the wants and conveniences of life, were also of remote antiquity; as we learn from *Homer*, who represented *Diomeda* and *Ulysses*, to have made use of such after washing in the sea. So also, the poet tells of *Andromache*, preparing warm water for *Hector*, on his return from battle; and of *Penelope* calling in the aid of unctions, and baths, to mitigate her melancholy, at the prolonged absence of her husband. It is from the hands of *Helen* herself, that the disguised *Odysseus* received these services. *Minerva* is feigned to have imparted renewed vigor to the wearied limbs of *Hercules*, at the warm springs of *Thermopylæ*; and *Vacca*, in place of other gifts, offered him warm baths. Numerous are the passages in *Homer*, which describe the custom of females attending male guests, and assisting them in their ablutions. On this point the following observations of *Athenæus* are worthy of remembrance. "*Homer* makes virgins and women wash strangers, which they did without exciting desire, or being exposed to intemperate passions; being well regulated themselves. Such was the custom of antiquity; according to which the daughters of *Cocalus* washed *Minos*, who had passed over into Sicily." The importance of bathing, as a means of cure of loathsome disease, is well illustrated in the directions given to *Naaman* the leper, (by the Prophet *Elisha*,) to wash seven times in the river Jordan: and still more in the command of our Saviour, for the blind man to wash in the pool of Siloam. The pool of Bethesda was also resorted to by the sick and infirm. It seems to have been a uniform part of eastern hospitality, to furnish water to the wearied traveller, for bathing his feet, as we find *Laban* to have done for the messenger of *Abraham*, and his attendants; and as *Abraham* did for the three angels in disguise, who tarried with him during the night. Bathing was strictly observed by the Jews, as a religious right, and with them was typical of moral purity. This was practised throughout central Asia, and the East, even before the time of *Moses*, during the patriarchal ages. *Job* speaks of purifica-



tion by snow water. It would seem, that the great Jewish law-giver and prophet was not merely influenced by his enactments, in this respect, by the necessity of preserving the health of the twelve tribes, during their long journeying through the wilderness, and their subsequent residence in the land of Canaan; but he was also swayed by the remote example of the Patriarchs, and perhaps by the more recent one of the Egyptians, whose priests washed their bodies three times a day, on the occasion of extraordinary sacrifices. So intimate was the emblem with the Jews, of bodily cleanliness, and moral purity, that their priests always washed their whole bodies, before they undertook to officiate in the temple. *Mohammed* required his followers to consider themselves bound to wash their face, head, neck, hands, and arms, severally before they repeated each one of their five daily prayers; and besides the ordinary lavations, there were others peculiar to each sex. The Greeks, it would seem, borrowed their practice of bathing as a religious rite, as well as a prophylactic remedy and Hygiene, from the Egyptians. Baths were sometimes called sacred by the ancients, and the reason of this designation is one of the problems proposed for solution by *Aristotle*. Sea bathing was held sacred by the ancients to *Neptune*; fountains and springs to the *Naiads*, and other nymphs, &c. At Syracuse, in Sicily, *Apollo Thermistes*, was worshipped; and in Thessaly, the hot springs of *Thermopylæ*, were dedicated to *Hercules*. In Italy, medical springs were sacred, to respectively, *Juno*, *Esculapius*, &c., as Lake Avernus was to *Pluto*, and that of Cuma, to the Sybil—who was designated by it. We will not follow these superstitions any farther; they go to show how near, that, in all time past, in ancient days, baths and ablutions were deemed right and necessary for the purification of the body, and stood as emblems of moral purity; both of which were, as they now are, and ever will be, necessary to the perfect health of the body and mind. *Soerates*, *Plato*, and *Aristotle*, talk of baths as in common use. *Hyppocrates*, about the time of the Peloponnesian war, recommends them in a variety of circumstances, both as hygiene, and as remedial agents in the cure of diseases. In the primitive houses of the Greeks, the bathing room is described as being included in the division of the first court; and the bath-room appropriated to the women and children, was, according to *Homer*, situated in the interior of the house. Sea bathing, as a strengthening remedy, was generally followed by the ancients; by a cleansing bath in a tub. “Noble women thus bathed and perfumed.”



(See *H. Huse*, on the public and private lives of the ancient Greeks.) Historically considered, bathing assumed the most importance, when it became a part of their hygiene, or that art by which all the agents of life and well-being are systematized. The practice of bathing, however, became a mania at times, and the Spartans adopted the practice of plunging their new-born babes into cold water; by which practice many of the delicate and feeble ones were killed, as some of ours are in this day. The ancient Germans were much addicted to bathing, as *Tacitus* tells us.

We might say much more on the subject of ancient bathing; but we come down to England. She had her sacred springs also, as that at Rye, in Sussex, into which some wonderful virtues were infused by the prayers of a certain Norman Monk. While Rome had her thousands of baths, and bathing places, England had her hundreds. Water of all temperatures has been, and is still used for baths, some from a superstitious notion of divine virtue, and others purely for Hygienic purposes. Who can read of the magnificence of the baths of *Agrippa*, and the manner in which he bequeathed them to the Roman people for their health, and not feel that those people set a high estimation on the Hygienic properties of bathing. The baths of *Etruscus*, made free by the *Emperor Claudius*, gave him great renown. The baths of *Caracalla* were ornamented with two hundred pillars, and furnished with sixteen hundred seats of marble; three thousand persons could be seated on them, at one time. But those of *Dioclesian* surpassed all the others in size and sumptuousness of decoration; they were enriched with the precious collection of the *Ulpian Library*. All this goes to show how much the ancients esteemed the Hygienic properties of bathing. It may be said, that bathing, as a means of preserving health, is of modern origin. We should rather say, to our shame, that it is too much neglected in many parts of our beloved country, even for common decency and cleanliness, but we refrain; and, in order to shorten our remarks on this part of our subject, we will give some directions for the use of the bath. Under all circumstances it is important, both to health and comfort, that the skin be kept clean, and the pores open. If a person be weak, and easily chilled, let him, or her, take a tepid bath. If this debilitates too much, take it at the temperature of the blood 98° of Fahrenheit. Weakly children should not be bathed oftener than three times a week; but in all cases, if the skin becomes soiled, it should be cleansed, either

with water, or soap and water. Adults should also use a bath, from two to four times a week, in the spring and fall ; every day in hot weather, and twice a week in the winter. The best time to take a bath is in the morning, before breakfast. The manner of taking the bath, is much practiced by a shower on the head ; but it is much more preferable, as a hygienic remedy, to use it by aspersion. Let those who use the bath, as a hygienic remedy, turn out of their bed in the morning, and step into a tub of cold water, and with a towel, or sponge, begin at the feet, and wash themselves quickly, to the arm pits ; then step out of the water, wipe dry, and put on the lower garments ; then throw off the shirt, and begin at the wrists, and bathe to the neck, then the face, neck, head, breast, and shoulders, wipe dry, and dress as quick as possible ; the quicker all this is done the better. The reason for applying the water to the parts as above named, first, is this : where you first apply the water, the first reaction will take place, hence you see, that all the vital organs are protected from a sudden rush of blood into them, as the brain, the lungs, stomach, &c. After bathing, some exercise should be taken in the room before breakfast. As a positive rule, the bath should never be taken on a full stomach, either by aspersion, ablution, shower, or dipping, either tepid, warm, or cold. If for the comfort, or for the refreshing and cooling effect, we take a bath in hot weather, it should always be after some active exercise, when the surface is heated, and an hour before, or four hours after dinner. Those baths may be taken in a suitable tub for this purpose, where a person can lie down, at the degree of 80°, and be enjoyed for half an hour, or more. Plunging into rivers, or pools, when the water is cold, should be done on an empty stomach, and not remain in the water, but two or three minutes ; unless active exertion is made by swimming. Let me repeat, again, weakly children should never be plunged into cold water, as a hygienic remedy, but their baths should be tepid, or warm, and used quickly. Where the shower, or aspersion cold bath, produces a chill in adults, that does not speedily go off, and a warm glow succeed, it should be changed for the tepid, or warm bath. (I mean, by the warm bath, one equal to, if not a little above blood heat.) As a man, or woman advances in age, the bath should become one of their regular practices, at least twice a week ; it should be tepid, it keeps the pores of the skin open, and moist, and aids digestion. If there is a dry harshness on the skin, strong friction should be used, till a full glow is produced all

over the surface, before taking the bath: this may be done by an assistant, with a pair of tight gloves on, or hair mits for that purpose. When great insensibility exists in the skin, salt is frequently dissolved in the bath, for the purpose of stimulating the skin; and when the person is apt to be chilled, this is proper, or where it is desirable to make the absorbents act more freely. Sea bathing is rarely used as a hygienic remedy; but as a medicinal course of treatment for disease. (For the reputation of that bath see Hydropathy.) No man is prepared to go into society genteely, unless his skin is thoroughly clean, and the secretions sweetened and natural.

*Diet.* The natural diet of all the mammalia is milk. This article is prepared by the living organs which secrete it from the blood, and deposit it in suitable receptacles, from which it is abstracted by sucking, or that action of the mouth, and tongue of the young, which is called by that name; though, philosophically speaking, the term sucking is not appropriate to this process, as it is abstracted by art, called milking, and fed to the young. Milk is, of all other diet, the easiest of digestion, when taken in its natural and warm state. Every process through which it is taken, preparatory to digestion, only impairs it, and makes it less digestible. Next to milk, vegetables, when properly prepared, are next easily digested. These require an artificial preparation, in as much as they never were designed as food for man, till he had teeth to masticate them, the *Grahamite* theory to the contrary, notwithstanding. It is true, that some vegetables are more palatable in their raw state, than they are after being cooked; but the number is comparatively few. As a general rule, children should not use vegetables as a diet, without being well cooked. Vegetables being the most appropriate diet for man, should constitute three-fourths of his diet. Those vegetables that require a large dilution with water, such as tea, coffee, chocolate, cocoa, &c., should always be sweetened, as the sugar adds greatly to the nutritive quality of those articles. As a general rule, children should not use any of those articles as a diet, without diluting them largely with milk, and having them well sweetened. There has been much said about the use of tea, and coffee as a diet. Some tell us they are not proper articles of diet for man: they judge of their effects on others, by the effect they have on themselves. The only rule that I find worthy of our judgment, in relation to those articles of diet, is this: do they agree with you, if they do, you can use

them; if they do not, you should not use them. And so we might say of almost every article of diet. So diversified are the conditions of various stomachs, either from abuse, habit, idiosyncrasy, and age, condition, &c., that no positive, or even general rule can be laid down by any man on dietetics. There is one general remark that may be made, which will govern every case, and that is, the proper exercise of the judgment; and also, that all meals should be taken regularly, and uniformly, and with as little variation from the same articles of diet as circumstances will permit. I know it is much desired, by many, to have a great variety of dishes on the table at once, and this variety must be changed very often. All this is wrong. The human stomach is neither a mill, or a fermenting vat. It is a living organ, and it performs its offices by a vital, and not a mechanical, or chemical process; therefore, we should not require it to do more than it can perform with ease and certainty. Then let it not be engorged with any article of diet; and especially, with a great variety at once of beef, pork, mutton, bacon, fowl, &c., with a half dozen different vegetables, and to top off with a rich dessert, and an abundance of sauce. What stomach could receive all these, and not be burthened even to positive oppression? Every article taken into the stomach must be rendered homogeneous: that is, perfectly assimilated with each other, before one drop of healthy chyle can be formed, of which the fluids and solids are made. If the stomach be so far over charged with those varieties, as to render it unable to assimilate them, then a chemical process commences, and acid is formed; the stomach is what you call sour. and vomiting or purging must be the consequence, in order to get rid of this chemical process; for, be it remembered, that chemistry and vital action are the opposites to each other. It is the province of vital action to build up, supply, and sustain the system; and it is the province of chemistry to pull down, and separate, dissolve, and analyze—to render heterogeneous, instead of homogeneous.

From what we have said, it will be readily seen, that the more simple and plain our diet is, the more healthy it is; and, as a result, the longer will those live who observe it closely. I am ready to admit, that the different seasons of the year bring their varieties of food; but this does not change my principle. I would only say, we should gradually slide into the change, and not rush into it precipitately. We can, with impunity, use more animal food in cold than in warm weather. Except the taste has been depraved, as are the heathens, we all prefer meats well cooked; but depravity,



by habit, has made some men prefer meat raw, to well done. Such persons are, generally, short lived; the more they partake of the animal, in their diet, the nearer their lives approach to the longevity of the animal.

In all miasmatic countries, and situations, it will be found very conducive to health, to take breakfast before exposing yourself to the unhealthy influence of a miasmatic atmosphere, or heavy fog. Instead of taking a potation of stimulants, take a cup of coffee, or a full meal. The dress should be varied according to the temperature of the air; and we should never sleep in wet clothes, if it is possible to avoid it. We should always sleep up stairs, in a city, in preference to the lower story; the bed room should be well ventilated, without a draft of air passing immediately over the bed. In all damp weather, it will be found conducive to health to have a little fire in the house, morning and evening, to expel the damp air. As a general rule, we should not take active exercise immediately after eating, as the process of digestion is retarded by it. Half an hour's sleep, after dinner, for those who are weakly, will do more for their digestive powers, than pounds of medicine. Keep your head cool, and your feet warm; if you would keep well. A slight indisposition may be often relieved, and a spell of sickness warded off, by drinking freely of cold water alone, and abstinence from food, or taking it very sparingly for a few days. This is the way to aid nature to perform her own cures, take away all her hinderances, and give her a chance to do her own work in her own way. Never eat while you are in health, unless you are hungry; nor take a drink of water, unless you are thirsty; but should you have taken very active exercise, or been deprived of water, till your throat and mouth seem to be dried, and you feel almost famished, be careful, then, how you take water; first gargle your throat two or three times, till you get the tongue, palate, and fauces well moistened, and cool, before you swallow any water. This will so allay your thirst, that you will not be liable to take too much. Always swallow a little at a time, and swallow it slowly. Thirst is situated at the root of the tongue, and not in the stomach. When a person feels like dying, for the want of water, if the region about the root of the tongue be freely gargled with vinegar and water, the thirst will be entirely allayed, and a few small swallows of water will suffice. No person should use ardent spirits as a beverage; it should only be taken as a medicine, and then in small quantities. It is poison, and will, sooner or later, kill if persisted in. I know it is said, by good men,



take a little, and it will do you no harm. I do not know, if I put my hand into a bear's mouth, that he will bite lightly; he may tear my flesh and bones to pieces. Keep away from danger, and you will be sure not to get bitten. The better way is to taste it not at all in health; then, if it becomes necessary as a stimulous, when you are sick, a little will have the desired effect; but, if you are in the habit of using it freely, your system becomes so habituated to its action, that when you really need it, it will do you no good. Temperance in all things is the only guarantee that any man has, for a long, useful, and happy life. Gluttony, wine bibbing, and laziness, lays the foundation of a host of diseases, and is a sure prelude to a short life. A man should not sleep more than eight hours in twenty-four: many men sleep not more than six, and enjoy good health for three-fourths of a century. Keep the body unincumbered with food, drink, or drowsiness, and your mind will be active and useful. No man, whose mind is sluggish, can enjoy life or yet be useful, either to himself or to society. On the contrary, every man owes a duty to society, as well as to himself; which is, to let the world be something better by his having had a place in it. This duty may be fulfilled in many ways. Every man is not a philosopher, or a business man; nor is he a mechanic or farmer: but every man has a talent for some one of those pursuits; or else he is only a machine, to labor as he is put in motion. Every man should strive to leave something behind him, by which his memory may be perpetuated. Hence, it is the duty of all men to marry, and raise a family: this he should not do, however, without the means of supporting them; and the industry that enables him to do this, will make him a useful member of society. "The proper study of mankind is man." Take this motto in all its moral, hygienic, sanitive, philosophical, mechanical, pharmaceutical, horticultural, and business aspects, and you will live long and usefully, both to yourself and the world. If you are attacked by disease, take care to use the proper remedies early, while the disease is in its forming stage: a little medicine will then remove it; but, if you let disease become deep seated, and the system overcome by it, you are in danger of losing your life, or having your constitution broken before you are cured.

## HOMEOPATHY.

It is by special request, I write a short chapter on this subject. In doing so, I shall avail myself of the researches of others into the merits of this system of practice, as well as the knowledge I possess of its merits, or demerits; and what I say, shall be as strictly as possible guarded by the principles of the great founder of homeopathy, and my conclusions as open to the criticism of others as the principles of *Hahneman*, are to myself. I hold, that every system of medical practice should be subjected to the most searching scrutiny—of truly scientific investigation. Let us lay aside all mysticisms, witchcraft, and transcendentalism, when human life is at stake; and let us, if possible, find and adhere to the truth. If we are not able to find the truth, let us confess it; but cease not to search after it, till happily we may find it. This, I conceive, to be the only safe course. If we are dissatisfied with the researches of the regular schools of medicine, we certainly gain nothing by catching at a new-fangled theory, and notions that are the results of a disappointed success in the practice. According to the established method of the science, we have, at least, the right to examine the foundation on which such new systems are founded, and all the grounds which it claims for the change. When the mind is awakened to the investigation of any system, whether it be governmental, educational, medicinal, or religious, in which all have an interest, a set of system mongers will be sure to spring up, and put forth something that will produce more or less confusion. This, for a time, may delay, yet it will not ultimately prevent the triumph of truth. The popular inquiry on the subject of medicine has fostered a number of conflicting systems of medical practice, which have been pressed into public notice. Added to the Allopathic, we have the Steam, the Botanic, the Hydropathic, and the Homeopathic systems, each maintained by hundreds of disciples and patrons. So general is the interest felt in these different methods of practice, that, in some sections of country, almost every person feels competent to pronounce judgment, much more decided than a man who has devoted a whole life time, to the study of diseases and their remedies.

Public confidence in the medical treatment of disease can never be restored, till the popular systems have been subjected to the test

of thorough, candid, scientific scrutiny. Scientific and common sense principles, may be applied to a system of therapeutics, as well as to a mode of agriculture, or mechanics. The means for restoring a diseased human body to health, lie as properly within the province of scientific research, as the means for restoring the fruitfulness of a field, or the repairing of a dilapidated machine; and any system of medicine, that will not stand this test, will soon be laid aside, as among the things that were. I shall now examine some of the principles of Homeopathy, as laid down by *Hahneman*, its author. I am aware, however, that many who profess to be his followers, are not, in all cases, guided by his rules; but, if they profess to be Homeopaths, and yet transcend the theory laid down by *Hahneman*, they are to be considered ignorant of his principles, or hypocritical in their profession and practice. Homeopathy professes to cure all curable diseases. The founder of this system has woven into it a great share of German transcendentalism. *Hahneman*, in common with all physicians who have studied the functions of the human system, in their healthy and diseased manifestations, know, that it is possible for these functions to be diseased in their manifestations, as well as the possibility of a farther organic derangement of the different organisms. And this action, or condition of the system, must be, if possible, remedied by the use of medicine. The peculiarity of the homeopathic system is found in the use of the means necessary to restore these functional, or organic derangements, to a healthy state. We shall endeavor to state *Hahneman's* doctrine, and not those doctrines taught by a school, or individual, who may have embraced his system, either in whole, or in part. Doctor *Kerby* says, "When we attempt to defend Homeopathy, those principles announced in *Hahneman's* Organon, and received by all acknowledged Homeopaths throughout the world, are the standard by which we reason, and by which we judge ourselves, and others." And Doctor *J. Bascom* says, "It is mainly from this same Organon, that I have drawn the following statement of principles." *Hahneman* declares, in his Organon, "That any disease is to be cured by the administration of a medicine, which, if administered in proper doses, to a healthy person, will produce a similar disease." Or, in the phrase so much hackneyed by his disciples, "*Similia similibus curanter.*" Let us hear what *Hahneman* has to say, himself, on this point. On page eighty-seven of the Organon, he says, "We ought to rely, solely, on the morbid appearances which medicines excite in a healthy person—the only

possible manifestation of the curative virtues which they possess, in order to learn what malady each one of them produces individually, and, at the same time, what disease they are capable of curing." Again, on page eighty-eight, "There remains, accordingly, no other method of applying medicines profitably, in diseases, than the Homeopathic; by means of which, we select from all others that medicine (in order to direct it against the entire symptoms of the individual morbid case,) whose manner of acting upon persons in health is known, and which has the power of producing an artificial malady, the nearest in resemblance to the natural disease before our eyes." Again: "Plain experience, an infallible oracle in the art of healing, proves to us, in every careful experiment, that the particular medicine, whose action upon persons in health produces the greatest number of symptoms resembling those of the disease which it is intended to cure, possesses, in reality, (when administered in convenient doses,) the power of suppressing, in a radical, prompt, and permanent manner, the totality of these morbid symptoms; that is to say, the whole of the existing disease. It also teaches us, that all medicines cure the disease, whose symptoms approach nearest to their own; and that, among the latter, none admit of exceptions." This is *Hahneman's* own statement of the doctrine which constitutes one of the leading peculiarities of his system. If this doctrine be true, we cannot, according to Homeopathic doctrine, either by the appearance, taste, or chemical properties of any medicine, say what its effect may be on the living system, either in health or disease. The question is to be settled wholly by experiment; "and to experiment the Homeopathist appeals." But, it would seem, that *Hahneman's* method of experimenting is unphilosophical; for, whatever may be the nature of disease, all must admit, that there is a difference between the healthy and physiological, and the diseased and pathological state of the system. If *Hahneman* wishes to know what agents will counteract a certain diseased or pathological condition of the system, instead of making the experiment on the system, while in that state, he makes it on the system in a healthy and quite different physiological state; and, what is still objectionable, the doses of the same medicine are so widely different, that no safe inference can be drawn from the action in one case, in respect to the action in the other. From the fact, that a grain of tartar emetic will nauseate a man in health, and perhaps, vomit him; it is by no means a philosophical inference, that the millionth of a grain



will cure nausea in a sick man. *Dr. Kerby*, in speaking of the effects of medicine, "supposes that a person will not believe that tartar emetic, in a dose of three grains, will cause vomiting." And he further supposes the physician to give this answer: "What I assert is true. Tartar emetic, in that dose, and even less, has been administered in tens of thousands of cases, and, perhaps, by as many physicians, within two hundred years; and they all concur. that it will vomit: but, if any one doubts the testimony, let him try to swallow a dose himself and he will personally experience the truth of it." *Dr. Kerby* adds, "All must admit this would be sound reasoning." Yes, certainly, this should be admitted by all; but it is the very thing that the Homeopathist will not admit. The Homeopathist declares, that a certain dose of certain medicine, will produce a certain effect on the system. We deny it, and offer to swallow the dose. "Oh, no!" says he, "you must take a dose a million times larger." But, sir, this materially alters the case. Stick to your text, Mr. Homeopathist, "*Similia similibus curanter.*" This is the great truth you claim to have discovered, and the world holds you to your position. But, we ask, has this position been proved to be true? Certainly not, by the great mass of scientific physicians, either of Germany or any other part of the world. Some minds, that are like kites, flying with every breeze, and never settled, only where there is nothing to unsettle them, may profess to be satisfied with this system. Let any well balanced mind examine the results of *Hahneman's* provings of medicines, on the system in a healthy state, and then judge for himself, in respect to the reliance that is to be placed on them in the cure of disease. He gives us no account of how the medicines are prepared; the mode of administration; or the doses required. But he occupies thirty-eight pages with the symptoms produced by charcoal; and fifty pages with symptoms produced by sulphur. Here are some of his symptoms, detailed as produced by these medicines in chronic diseases: Vol. iii. p. 46. Here he details the symptoms produced in persons in health, by the use of charcoal. "Painful straining in the left ear; straining in the right ear in the evening; straining coming out at both ears; pinching in the left ear; tearing in the interior of the right ear; tearing pains in the groove in the right ear; tearing and burning pain in the left lobule; tearing jerks, or single stitches in the right meatus auditorius internus; stitches in the left meatus auditorius from without inwards; (p. 48.) itching of the upper part of the ear, which



afterwards became hot." These are only a part of the symptoms referred to the ears. Then follows a few of the symptoms developed in the head, by the same articles. "Obtusion of the head, aggravating thought; considerable obtusion in the head, in the morning after rising; obtusion in the head for several days, without any pain; obtusion of the occiput, as in intoxication," &c. This obtusion of the head is a favorite symptom in *Hahneman's* provings. Almost every article in his *Materia Medica* produce obtusion of the head. What man would acquire confidence in the homeopathic remedies, by examining these provings? But let us return to his principles, *Similia similibus curanter*. That which will produce the disease, will cure it—if homeopathically applied. If burning a burn will cure it; if opium will cure an apoplexy; if cutting and gashing a fresh wound will cure it; if bleeding and starving a starved man will restore his strength; or to transfuse more blood into the veins of the already plethoric, will make him lean; or feeding him on roast beef will reduce his flesh and blood; or to throw a drowned man into the river to restore life, be a rational practice; then we should receive the doctrine, and practice upon it. But, till such can be satisfactorily shown to be true, we ask to be excused from believing in it. *Dr. Post* quotes the old ditty, (and none can be more appropriate,) and the editor of the *American Journal of Homeopathy* declares it to be a strong point against Homeopathy, or *Hahneman's* system; and although it may seem a little low, we venture to repeat it here:

"There was a man of Thessaly,  
He was so wondrous wise,  
He jumped into a bramble bush,  
And scratched out both his eyes.  
And when he found his eyes were out,  
With all his might and main  
He jumped into another bush,  
And scratched them in again."

Yes, but says the homeopathist, you have gone too far with this matter; I appeal to *Hahneman's* principles, "*Similia similibus curanter*." I shall not allow you to deny the basis on which your master stands.

The next great and fundamental principle in *Hahneman's* system, is this: "Where medicines are administered homeopathically to the sick, they do actually produce a new disease in the system, similar to the original one, but more intense in its

character ; hence, he directs you to give the homeopathic medicine, till they produce a sensible but slight aggravation of the disease. Here let him speak for himself. *Organnon*, p. 90. "The curative powers of medicines are, therefore, grounded upon the faculty which they possess, of creating symptoms similar to those of the disease itself, but which are of a more intense nature. It necessarily follows, that disease cannot be cured in a certain, radical, prompt, and permanent manner, but by the aid of a medicine which is capable of exciting the entire group of symptoms which bear the closest resemblance to those of the disease, but which possesses a still greater degree of energy." Again: *Hahneman* says, "This law is founded on the natural law of Homeopathy ; a law unknown till the present time, although it has, on all occasions, formed the basis of every visible cure ; that is to say, a dynamic disease in the living economy of man, is extinguished in a permanent manner, by another that is more powerful ; when the latter, without being of the same species, bears a strong resemblance to it, in its mode of manifesting itself." If this were true, vaccination that prevents small-pox, should be a more powerful disease than small-pox ; and the remedy that cures all diseases, being more powerful than the disease itself, it would seem reasonable that we should choose the least evil, and let the disease alone. Again: p. 153, "A remedy, which has the power and tendency to produce an artificial disease, closely resembling the natural one, against which it is employed, and which is administered in appropriate doses, affects, in its action on the organism, precisely those parts which had, till then, been a prey to the natural disease, and excites in them the artificial disease which it is naturally capable of producing: the latter, by reason of its similitude, and greater intensity, now substitutes itself for the natural disease." The idea, that medicines being introduced into the system, to produce a disease different from the one existing, is by no means to be attributed to *Hahneman*, it is much older than his grand-father, or great grand-father. But, that it produces a similar disease, much stronger than the one it cures, is not true, either in Allopathy, or Homeopathy. Mercury certainly produces a disease, where it is introduced into the system so as to salivate ; but it is different from the fever, or syphilis it cures by the mercurial fever. But, suppose *Hahneman* is right ; what have we gained ? We have removed one stage of disease, but we have produced a still higher grade of the same disease. But, forsooth. by it the patient is cured. Away with such philosophy.

It is a poor subterfuge to say, the second disease will disappear of itself. I should certainly risk the original, being a milder disease ; to disappear of itself.

There is another doctrine found in *Hahneman's* works, which, perhaps, is not so fully believed by all his followers ; it is this : that most chronic diseases are dependent on a miasm, which has come down to us, through successive generations, from remote antiquity. This he calls the "psoric or itch miasm." He tells us, it cost him "twelve years' research to discover this great truth." Happy would it be for truth, if he did discover it in that length of time. Men have labored twice that length of time, to establish what, in the chimera of their brain, they suppose to be true ; but, when it is scrutinized, it proves to be false. He refers, "Hysteria, dropsy, cataract, pains of all kinds, and the itch, to common causes." We cannot have respect to such unreasonable doctrines.

But, let us say something about his medicines, and the manner of their preparation. The homeopathic doctrine is, that, by trituration, agitation, and friction, the power of medicines, over morbid conditions of the system, is either developed *de novo*, or greatly exalted ; and that they thus become capable of exerting a spiritual dynamic agency. It is fully admitted by *Hahneman*, that some of the important articles of his *Materia Medica* possess no medical properties in their crude state. Vegetable carbon, for example, in its crude state, possesses no medical properties. But, says he, "by trituration, they are spiritualized, or *dynamized*, so as to become very powerful." But as the class of physicians to which I belong, according to *Hahneman*, "feed on no other ideas, but what are gross and material," it becomes necessary that we quote the language of *Hahneman* himself. Hear him : "The homeopathic healing art develops for its purposes, the immaterial (*dynamic*) virtues of the medical substances, and to a degree, previously unheard of, by means of a peculiar, and hitherto untried process. By this process it is, that they become penetrating, operative, and remedial, even those that, in a natural, or crude state, betrayed not the least medicinal power upon the human system." After detailing this peculiar process, which we shall presently give, *Hahneman* adds, in a note : "In order to have a determinate rule for the moderate development of the power of the fluid medicines, multiplied experience and observation have led me to retain two shakes for each vial, in preference to a greater number which had been previously used, but which developed the energy in too great a degree."

On the contrary, there are homeopathsists who, in their visits to the sick, carry about their person the medicine in a fluid state, which they nevertheless affirm, do not in time become increased in energy by the frequent agitation to which it is thus subjected. This declaration, however, betrays, on their part, the want of a talent for accurate observation. "I dissolved a grain of nitre, in half an ounce of a mixture of water and a little alcohol; poured the solution into a vial, which was thereby filled two-thirds, and shook it uninterruptedly for half an hour: by this agitation, the fluid attained an energy equal to that of the thirtieth dilution." *Organnon*, p. 200. In a preface, dated at Paris, in 1839, *Hahneman* says: "Homeopathic *dynamisation*, are processes by means of which the medical properties of drugs, which are in a latent state, in the crude substance, are excited, and enabled to act spiritually (*dynamically*) upon the vital forces; that is, upon the sensibility and irritability of the fiber, by employing proper care in the preparation of our potencies, even the fiftieth potency becomes exceedingly powerful; so powerful that a pellet of that potency has frequently to be dissolved in a large quantity of water, and has to be taken in very small doses by susceptible patients, lest the effect should be overwhelming." Can any man, in his sober senses, believe there is a word of truth in the statements made above? No one, but a lunatic, could believe it. Another principle in Homeopathy is, the administration of infinitesimal doses of their medicine to the sick. This is very naturally connected with the idea of spiritual agency; and to this peculiarity of the system we would now call the attention of the reader. It is generally understood, that this class of doctors deal in very diminutive doses of medicine, that they carry very small bottles with very small pills. There are but very few persons, who have paid sufficient attention to this matter to understand any thing about it. It is only due to this class of doctors to say, they disagree among themselves in relation to the strength of the medicine they use. There are the *high dilutionists*, and the *low dilutionists*. Some give a dose, that contains a thousandth million times as much medicine as that of others, and for the same class of symptoms. *Hahneman*, the father of the system, however, should be the standard by which his system should be tried. He says, "vegetable medicines are to be prepared by expressing the juice, and mixing it with an equal quantity of alcohol." This he calls the *mother tincture*. *Organnon*, p. 200. "If two drops of a mixture of equal parts of



alcohol, and the recent juice of any medicinal plant, be diluted with ninety-eight drops of alcohol, in a vial capable of containing one hundred and thirty drops, and the whole twice shaken together, the medicine becomes exalted in energy to the first development of power, or, as it may be denominated, the first potency; the process is to be continued through twenty-nine additional vials, each of equal capacity with the first, and each containing ninety-nine drops of spirits of wine; so that every successive vial after the first, being furnished with one drop from the vial, or dilution immediately preceeding it, which had been twice shaken, is itself, in turn, to be shaken twice, always remembering to number the dilution on the cork as the operation proceeds. These manipulations are to be thus conducted through all the vials, from the first up to the thirtieth dilution, or diecillinth development of power, which is the one in most general use." All other medical substances, as the metals and other minerals, petroleum, phosphorous, the parts of plants obtainable only in the dry state, neutral salts, &c.; one and all are, in the first place, exalted in energy by attenuation in the form of powder, by means of three hours trituration in a mortar. To the millionth degree of this, one grain is to be dissolved, and brought through twenty-seven vials, by a process similar to that employed in the case of vegetable juices, up to the thirtieth development of power. When these preparations are to be given, little globules, made of starch and gum water, are prepared, two hundred of which will only weigh a grain, these globules are moistened with the thirtieth dilution; five or six of these globules are mixed with a small portion of the sugar of milk, (if that cannot be had, a little finely pulverized loaf sugar,) and dissolved in a glass of water, from which the patient must take from one to two tea-spoonsful, once in an hour or two, according to the violence of the disease.

Here we have before us, essentially, the whole pharmacy of the homeopathist. The principle medicines they use are of the most potent poisons; such as aconite, arsenic, strychnine, belladonna, morphine, prusic acid, quinine, and other medicines of less power. If they give calomel, the thousandth part of a grain is a large dose, (but I was told, by a popular homeopathist, if he ever gave more than the ten thousandth part of a grain, he gave more than he intended.) We are hard of belief, however, that they follow *Hahneman's* system in this country. As these dilutions are conducted in these little vials, it would seem to be by no means a



formidable one; but try a few figures on the subject, and you will find, that the dilution must be carried to an inconceivable extent. The proper measure of the degree of dilution is the quantity of alcohol, (or water) required to carry a grain, or a given portion, or a drop of this juice of the medicinal plant, to the thirtieth dilution. And how much water would be required for this purpose? We cannot measure it by gallons, or barrels, or hogsheds; all our measures of capacity do but mock us. Lakes and even oceans of water do not begin to supply the requisite amount. Do not be startled, *Doctor Bascom* says, "Were the whole space appropriated to our solar system, from the central sun to the distant orb of *Herschel*, filled with water, even this would not suffice. Nay, it would require more than a quintillion of such masses. If the quantity of water necessary to carry one drop, to the thirtieth dilution, was in one solid cubical mass, it would exceed nine quintillions of miles in diameter; and light, moving at the rate of two hundred thousand miles per second, would be more than fourteen hundred years in passing through it, from side to side; even the thirtieth dilution, the one *Hahneman* says, is "*most commonly used*," leads us where our conceptions become dizzy, and we begin to stagger. What shall we think, then, of the fiftieth dilution, which is said, by *Hahneman*, (in the passage quoted above,) to be so powerful, that a pellet containing one two-hundredth part of a grain of the liquid, must be dissolved in a large quantity of water, and given in very small doses, to every susceptible patient, lest the effect should be overwhelming. Stretch your imagination, if you choose, to conceive of the quantity of water necessary to carry out this dilution, for I am not willing to try it. I would as soon expect to take a tea-spoonful of the water of Lake Superior, after one drop of this solution had been thoroughly mixed in it, for an emetic, and expect to be vomited thereby, as to believe, that any medicinal effect whatever can be produced by any such preparations of medicine. It is surprising, that *Hahneman's* transcendentalism ever should have taken hold of the minds of sensible men: but it has done so, and here is the system, and the practice: judge for yourselves. I have never known a man, whose mind was well balanced, follow the practice. Men, in this country, may sail under *Hahneman's* flag, but they do not follow his system in their practice.

## HYDROPATHY, OR THE WATER CURE.

It is not our intention, in this chapter, to lay down a complete systematic mode of the water cure, but simply to show that the use of water, not only as a hygienic remedy, but as a remedial agent, in the cure of disease, has been customary almost from time immemorial. We shall also lay down some general rules for the use of water, as in the warm, tepid, and cold baths, as well as a febrifuge; with some notice of the use of water in its various external applications. The antiquity of bathing is too well understood, and acknowledged by the historical reader, to require proof. In the best description of ancient manners, we meet with accounts of bathing in rivers; as when the daughter of *Pharaoh*, and her attendant maidens, went down to the Nile; and *Nausicaa*, and her companions indulged in similar enjoyments, in the stream near her royal father's residence. Domestic baths, suggested by the wants and conveniences of life, were also of remote antiquity; as we learn from *Homer*, who represented *Diomedea* and *Ulysses*, to have made use of such after washing in the sea. So also, the poet tells of *Andromache*, preparing warm water for *Hector*, on his return from battle; and of *Penelope* calling in the aid of unctions, and baths, to mitigate her melancholy, at the prolonged absence of her husband. It is from the hands of *Helen* herself, that the disguised *Odysseus* receives these services. *Minerva* is feigned to have imparted new vigor to the wearied limbs of *Hercules*, at the warm springs of *Thermopylæ*; and *Vacca*, in place of other gifts, offered him warm baths. *Atheneus* remarks, that females often attended male guests, and assisted them in their ablutions. *Homer* makes virgins and women wash strangers, without being exposed to intemperate passions; "being well regulated themselves." Such was the custom of antiquity; according to which the daughters of *Cocalus* washed *Minos*, who had passed over into Sicily. The importance attached to bathing, as a means of cure of loathsome disease, is well illustrated in the directions given to *Naaman* the leper, (by the Prophet *Elisha*,) to go and wash seven times in the river Jordan: and still more so, by our Saviour, when he commanded the blind man to go and wash in the pool of Siloam. The pool of Bethesda was also resorted to by the sick and infirm. Although these commands certainly carry with them the idea, that

they were designed for more than simply the cleansing the skin; yet they show that, if nothing more, they were types of that which was capable of cleansing the soul. It seems to have been a uniform custom with the ancients, to furnish water to a traveller to bathe his feet; as in the instance of *Laban*, for the messenger of *Abraham*; and *Abraham* himself, who furnished water to wash the two angels' feet, who tarried with him in disguise. Bathing by the ancients was considered typical of moral purity; consequently, ablution and immersion was made to perform part of the religious rights of the inhabitants of central Asia and the East. In the patriarchal age, these ablutions were strictly attended to, as when *Jacob* commanded his family to purify themselves, and change their garments, before they went to Bethel to sacrifice. *Job* speaks of a like purification with snow water. It would seem that *Moses*, the great Jewish lawgiver and prophet, was not merely influenced, in his enactments in this respect, by the necessity of preserving the health of the twelve tribes, during their long journeyings in the wilderness, and their subsequent residence in the land of Canaan; but he was also swayed by the remote examples of the Patriarchs. The Greeks, though familiar with the practice of bathing, for the purpose of health and recreation, were indebted to the Egyptians for a well regulated system of bathing, as a part of the medical art.

Baths were sometimes called sacred by the ancients, and the reason of this designation is one of the problems proposed by *Aristotle*. Whether it originated in a belief of the divine origin of baths, particularly those of natural hot springs, or from the circumstance of their being dedicated to particular deities, is a question of no particular moment to us, as it stands connected with our present subject. We read, however, that sea baths were held sacred to *Nep tune*; fountains and springs to the *Naiads*, and other nymphs, &c. At Syracuse, in Sicily, *Apollo Thermistes* was worshipped; and in Thessaly, the hot springs of *Thermopylæ* were dedicated to *Hercules*. In Italy, medical springs were sacred to, respectively, *Juno*, *Esculapius*, &c.; as Lake Avernus was to *Plato*, and that of Cuma, to the Sybil—who was designated by it. Following these almost venial superstitions, the Christians, in Italy, gave names to various springs, after those of the apostles and saints. "As *St. Christopher*, because the water imparted divine relief; *St. George*, because it healed wounds; *St. Luke*, because it was good for diseased eyes; *St. Bartholomew*, because it purified the skin; *St. Nicholas*, on account of the generous hospitality of this saint,

and of his giving baths to the poor." *Baccius*, from whom these facts are gathered, concludes with a pious reflection, heathen as he was. "Both patients and physicians should remember, that whatever relief of a wonderful and unexpected kind is procured from bathing, is due, not so much to the bath, and the doctor, as to the divine goodness." This may sound like ethical casuistry; but, in these days of materialism, it is worth being repeated.

Methodical bathing first began to be practiced in the East: the climate demanded it; and it was soon carried to all the refinement that sensuality could devise, for the promoting of varied sensations as precursors to repose. The Egyptians used warm, as well as cold baths; though, for ordinary purposes, the cold bath was preferred. How the Persians prized the bath, we may infer, from the manner in which *Plutarch* represents *Alexander's* great astonishment at the sight of those of *Darius*. The Greeks, it is true, joined their public baths to the gymnasium, so that athletic sports should be succeeded by bathing; and this, again, by alternate conversation on literature and morals, while the people were sitting, or slowly walking under their long and finely sculptured porticos. The Romans were indebted to the Greeks, for the more refined modes and extensive use of bathing. *Socrates*, *Plato*, and *Aristotle*, talk of baths, as in common use, about the time of the *Peloponnesian* war, and recommend bathing, both for the purpose of preserving health and the cure of disease. The Greeks had baths in all their private houses; and there were separate baths for the women and children in the interior of the house. In the *Illiad*, *Hector* appears to have taken a bath in the interior of the house. The strengthening bath, as it is generally termed, in the sea, was followed by a cleansing bath in the house, in a tub. And the only superior privilege, as they supposed, enjoyed by the immortal gods, seems to have been in the ambrosial oil, with which the goddesses heightened their charms after the bath, and which was thence called *kallos*, or beauty ointment. In all other respects, they shared their refreshments with mortals. Noble women, thus bathed and perfumed, were accustomed to put on fragrant garments. (See *Hase*, on the public and private lives of the Greeks.) The ancient Germans were much accustomed to bathing, which they practiced when they first arose in the morning; and, on account of the coldness of the climate, they used a warm bath. *Camden* tells us, that the Gauls, the progenitors of the Britons, had their sacred fountains, which they called *Diona*, and which were employed for lustrations as



well as the cure of disease. The Romans, at first the imitators of the Greeks, eventually surpassed them in the magnificence and grandeur of their baths. These were brought to great perfection, about the time of *Pompey*; when the custom of bathing every day was introduced. The use of hot baths, dates from about the time of *Augustus*, to whose favorite and minister, *Mecenas*, the Romans were mostly indebted for this source of luxurious enjoyment. *Agrippa* increased the baths at the *Thermæ*, to one hundred and seventy; and, in the course of two centuries, there were upwards of eight hundred in imperial Rome. Water of every grade of temperature was used, and sea water, and the sulphur waters of *Albula*, near the *Tiber*, was introduced. Architecture, sculpture, and refinement exhausted their inventive genius in the structure of those baths. The baths of *Titus*, *Antonius*, *Caracalla*, and *Dioclesian*, succeeded those of *Agrippa* and *Nero*. *Martial*, in one of his epigrams, asks, Was there ever a more execrable man than *Nero*? And yet, is there any building that equals his *Thermæ* in magnificence? It has been supposed, that not less than half a million of hogsheads of water was used in every twenty-four hours in the baths of Rome; which was brought in aqueducts from the hills: and they still supply (what of them remain,) those beautiful fountains for which Rome is so famous. The Romans used hot, warm, cold, shower, sitting, and vapor baths.

*Seneca*, in a letter, contrasting his own times with the period of the Republic, gives a lively picture of the splendid adornments of a private bath. He says, "That persons are now held to be poor and sordid, whose walls shine not with the profusion of the most costly materials, the marbles of Egypt, inlaid with those of *Numidia*; unless the walls are gorgeously stuccoed, in imitation of painting; unless the chambers are covered with glass; unless the *Thrasian* stone, formerly a rare sight in temples, surrounds those capacious basins, into which we cast our bodies, weakened by immoderate sweats, and the water is conveyed through silver pipes." Again: "As yet, I speak only of plebeian baths; what shall I say, when I come to those of our freed men. What a profusion of statues! What a number of columns do I see; supporting nothing, but planned as an ornament, merely on account of the expense. We are come to that pitch of luxury, that we disdain to tread on any thing but precious stones." Here they used the various modes of the bath; such as hip baths, and the *douche*, or spout bath. And *Pliny* mentions a small bath suspended, by ropes, from the ceiling of the



house in which luxurious persons were rocked. The medical use of these various baths are, however, not very well described by the Roman physicians. *Galen*, in treating a case of marasmus, used the *frigidarium*, or cold bath; the *tepidarium*, or tepid bath; and the *caldarium*, or warm bath. The mode was thus: "The person afflicted was to be carried on a bed, into a cold room, where there ought to be at hand a cotton sheet, to cover him, should the room be sufficiently warm to undress in; if not, some slight covering should remain on him, until he is carried into the tepid room, where his whole body must be anointed with oil. He is next to enter the warm room, and be carried to the place where the bath is, that he may pass completely through these three rooms. Those who carry him, should not go with a quick pace, but stay as long in the first room, as they were in taking him out of bed; and as long in the second, as they were in anointing him. The air in these three chambers should not be too hot, nor too cold; but it should be moderately humid, which may easily be effected, if there is a plentiful flow of water into the labrum, so as to dissipate the stream throughout the rooms. After having continued a short time in the warm bath, he should be brought back, and immersed in the cold bath as quickly as possible; then wipe with a sponge and cotton cloth, put into his litter, and carried home." *Celsus*, in giving advice to those who suffer from afflictions of the head, directs them, "on entering the bath, to sweat a little in the *tepidarium*, where they are to be anointed then to pass into the *caldarium*, where they should continue to sweat. They are not to descend into the warm bath, (in solium nondecendece,) but only to have a quantity of the warm water poured upon their head; after that the tepid, then the cold, and longer on the head than on other parts: the head ought then to be rubbed for some time, afterwards wiped, and anointed a new." It is evident, from *Celsus*, that there was water in all the three rooms, of a degree of heat in proportion to that of the air; and that the order of passing through them, was similar to that commonly practiced by the daily frequenters of the baths in those days. We are further informed, that, on occasions where there were no conveniences for immersion in the *solium frigidarium*, or basin of cool water, effusions, or aspersions of cool water like a shower bath, were recommended. This is, in fact, resorted to in the Turkish baths, where the large bowl, or basin is not found. We learn from *Celsus* and *Galen*, that the bathers were anointed in the *tepidarium*, or tepid bath-room; and it would appear, that this room

was warm enough to raise a perspiration when the clothes were on. It was customary for those in the room to sweat a considerable time, at the edge of the *labrum*, or basin, before they went into it. The *frigidarium* was not a cold bath, that is, of the natural temperature of the water; it was only cooler than the other rooms. The Arabians and Moors, in ancient times, were famous for these baths. In the seventh century, Alexander rivalled ancient Rome, in the splendor of her edifices; as she did in the number of her baths. There were no less than four thousand of them, when the City was taken by the Moslems, under the command of *Amron*. Willing and prompt to adopt the arts and sciences of the people whom they conquered, and with a keen relish for all that could minister to tasteful enjoyment, the Arabians and Moors soon erected baths; which, in their richness of decoration, rivalled those of their Roman predecessors; but, in their general arrangements, they resembled them. Mr. *Irwin*, in describing the interior of the Alhambra, says, with his usual felicity of language, "An abundant supply of water, brought from the mountains by old Moorish aqueducts, circulates throughout the palace, supplying its baths and fish pools; sparkling in jets within its walls, or murmuring in channels along the marble pavements. When it had paid its tribute to the royal palace, and visited its gardens, &c., it flowed down the long avenue leading to the city; tinkling in rills, gushing in fountains, and maintaining a perpetual verdure in those groves that embower and beautify the whole hill of the Alhambra. Ample provision was also made for baths in the Oriental style, by means of flues distributed through the walls, from the subterranean furnaces.

The French are famous for bathing, and were so long before civilization was fully established there. The Franco-Gauls continued, though in a restricted manner, the practice of the Romans. The most ancient Roman edifice discovered in Paris, was the bath of *Julian*, which received its water from the reservoir of Rungis. After the Roman baths began to fall into disuse in Paris, the vapor baths were introduced. These were situated mostly along the banks of the *Seine*, and near the city gates; likewise in courts, and along small streets, otherwise little frequented.

Bathing, at one time, was considered a necessary part of hospitality. When a great feast was to be given, baths were prepared for the guests, to be used before dinner. In the chronicles of Louis IX., we read of entertainments given by the officers of the court, and of the city, to the King and his attendants, and to the

Queen and her ladies; part of which consisted in the preparations of baths for their use, before the repast. Bathing, in France, was not only attended to, from motives of cleanliness; but also in compliance with the exigencies of fashion. The hospitals were sumptuously supplied with all kinds of baths.

*M. Girard*, who has given to the world the progress and fluctuations of bathing establishments in Paris, enumerates the number and locality, and their increase, up to the year 1832. The number amounted to seventy-eight, and contained two thousand three hundred and seventy-four bath tubs. In addition to those in the city, there were three hundred and thirty-five in boats, on the river Seine, making a grand total of three thousand seven hundred and sixty-eight separate warm baths, accessible to the public for pay. In addition to these, there are one thousand and fifty portable bath tubs, which are carried to any part of the city, with warm water to fill them. Cold and swimming baths were also abundant; and also swimming schools, properly conducted, where both males and females are taught to swim, in separate covered baths. (See *Annals of Hygiene*, and of *Medicine*, by *M. Girard*.)

The ancient baths, built by the Romans in England, met with neglect, and fell into disuse in the fifth century. The ancient Romans abandoned the island about that time, and these institutions were destroyed by the Saxons. But the introduction and spread of leprosy in England, and indeed, throughout the island, after the Norman conquest, might be supposed to have brought back the use of bathing, and revived, at least, to a certain extent, the Roman practice in this respect. But, although numerous hospitals were built, and endowed for the reception of the diseased, we do not learn that bathing constituted a part of their treatment. *Sir William Temple*, who wrote about the middle of the seventeenth century, says, that bathing was scarcely practiced at all in England, on the score of health, and if resorted to, was only for amusement. That this remark is well founded, seems to be the more probable, from the fact, that the word bath, is not found in the writings of *Sydenham*, who ranks so deservedly high, among the English medical classics. Since his day, however, the cold bath, for medical purposes, has been carried to an extreme in England; but the warm bath, except by invalids at *Bath*, is of late usage. Now England has many famous, and luxurious baths, such as the peerless pool, back of *St. Luke's Hospital*, London. *William Kemp*, an eminent jeweller, and citizen of London, had these baths built. But about the middle

of the last century, the public attention was directed to the subject of the warm and vapor bath, by *Dominiceti*, a man of some enterprise, who had some respectable pretensions to a knowledge of the science of medicine. He wrote a work on medicine, and one on vapor and warm baths. The ostensible object of this work was to set forth his wonderful cures, by what he was pleased to call his "arbitrarily medicated and heated water and vapor baths, fumigations and fictions." From the boastings of *Dominiceti*, that he could do such wonders with his steam, or vapor baths and hot water, have sprung a host, in the present day, of steam doctors, who go about our country, first filling the peoples ears with strange jargon, and next their stomachs with cayenne pepper and lobelia, and their skins with hot water, or vapor. The botanical school itself, as some millennial herbatists call themselves, which cannot see safety in any mineral, nor poison in any vegetable, could not hold the surgeon's knife in much greater dread, than did *Dominiceti*.

This boasting Italian, however, whose success was principally confined to the secrecy of his practice, except to those who paid him well for his secret, soon died, and his science degenerated as before stated, into the multiplied hundreds of steam doctors, and root doctors, all of whom keep their remedies as secret as possible, lest they lose their charm, and they fail to get employ. Of later years, the attention of English physicians have been directed to the use of the vapor and warm baths, by the writings of *Sir A. Clark*, *Dr. Blegborough*, and *Dr. Kentish*, and the experience of *Basil Cochrane*, and others, with beneficial results. The Oriental practice of vapor bathing, and shampooing, have been made fashionable at Brighton, under the direction of *Sahe Doen Mahomed*. The Germans are not so apt to bathe frequently, though they use the baths at their watering places. But in no country do the people bathe more frequently than in Switzerland, and the countries of western and middle Europe. *Marcard* says, he received more information on this subject from *Zimmerman*, *Tissot*, *Herzel*, and *Holze*, than from all the physicians he ever conversed with on the subject. Italy stands first among the countries of the western empire for her numerous thermal and mineral springs, and baths as remedial agents. In the northern part of the Peninsula, the thermal springs, near Padua, have always been celebrated. Batling, in all its varieties of immersion, douche, and lustration, is largely practiced here. To the existence of these springs, are we most probably indebted for some of the most esteemed contributions



by Italian writers, to the medical history of baths and mineral water. *Montagna*, *Savonarola*, and *Dondi*, were natives of Padua. These men have written on these subjects ; and *Savonarola's* works are celebrated in modern times. He wrote about a century before *Baccius*. The French have also thermal springs, and baths for the use and benefit of the afflicted. But it is not in the civilized and central parts of Europe that we are to look for the most systematic rules for bathing, among the great body of the people. The practice is carried out to its full extent in the eastern and northern portions of that continent, among the Turks, Russians, and Finlanders ; and in central Asia, and northern Africa, among the Asiatic Turks, the Persians, and Hindoos, and the inhabitants of Egypt and Barbary. Its origin and continuance can hardly be referred to climate, when we find it under latitudes so remote from each other, as the North Cape, and the Gulf of Persia ; nor to religion, since it is participated in by the immense population of the Greek Church, as well as by those professing the Mohammedan faith. There is this difference, however, growing out of location : the people of the North are most favorable to the moist ; and those of the South to the dry vapor bath. The North American Indians are notorious for the hot, or sweating bath, for the cure of fevers, pains, rheumatism, &c. They build their baths so close, that no air can enter them, except at the place where they are entered, with a solitary hole left in the top for the smoke and steam to escape. After heating them as warm as they can bear, they shut themselves up in them, and remain there till the perspiration flows freely ; and when they come out, they are enveloped in perspiration, and, in this condition, they plunge into a river, or pond of cold water, two or three times ; then run to their wigwam, and wrap up, and lie down by a fire, and turn over frequently, till they are dry : then they get up, and attend to their ordinary vocation. The Indians and Mexicans pursue nearly the same practice, in this respect, for the cure of disease.

The present inhabitants of the United States are not greatly in the habit of bathing. We have, it is true, many valuable thermal springs, and watering places, prepared with comfortable baths, many of which are yearly resorted to for the purpose of the medicinal effects of the waters, both by drinking and bathing. We might, with great propriety, in our own beloved country, take a hint from the Romans, and require our public authorities to make provision for the benefit of the people, by erecting suitable bathing



establishments, the admission to which, if not entirely free, should be at so low a rate that all could have it in their power to visit them. Taxes are levied for purposes far less useful than this; and assuredly, if we have boards of health in our chief cities, the duties of which are to guard us against contagion, either imported or domestic, and to remove nuisances which give rise to disease, it ought to be made a part of their duty to protect the citizens against the bad effects of personal uncleanness, and the numerous diseases that grow out of it. Let public baths be erected, and let suitable officers be appointed to attend to them. What constituted part of the duty of one of the chief officers of the Roman republic, would hardly be thought worthy the attention of many of our citizens.

It may be thought, that we have said too much on the general subject of bathing; but let it be remembered, that bathing occupies no small place in the healing art; and when we turn our attention to it, it would seem only to mock it, unless we at least take some notice of the countries in which it has been, and yet is, and ever will be extensively used as a remedial agent. The best physicians of all countries, and in all time past, have given their devoted attention to this subject; and let him who presumes to say, or think, that he has originated any thing new, bear in mind, that by so doing, he only publishes his ignorance to the reading portion of the world. We know, we have only said a word, in comparison of what might be said on the subject of the practice of the world on bathing. But, we hasten to make some practical remarks, that bathing may be rendered practicable by the reader, and then we shall bring this chapter to a close; though the subject is worthy of a volume, and would require it, instead of a chapter, to do it justice.

In order to present the subject in a clear point of view before the reader, we think it best to separate the different uses, or applications of water, as a remedy in disease: and as the use of water, as a drink, is of all others most requisite, we shall say something on this branch of our subject first. It would not be difficult to array a host of witnesses from the faculty of medicine, both ancient and modern, to sustain us in the assertion, that water is the only safe drink, as a beverage, for man. Water, considered in its physiological relations, is still, emphatically, one of the elements as described by the ancient philosophers. It makes up the chief bulk of all animal and vegetable bodies; it gives the necessary fluidity to the blood of the former, and the sap of the latter, without which

neither could flow, or be distributed to the several tissues and organs. Diffused through the atmosphere in the form of vapor, water renders the air fit for respiration. Air, deprived of all humidity, would cause a rapid and exhausting evaporation, both from the skin and lungs, and reduce the being to extreme exhaustion, if not to death itself. Not only does the blood contain four-fifths of its weight in water, but even those parts of the body termed solids, that is, the mass of flesh, contain, in reality, not more than one-fourth of solid matter, the remainder being water. Bone, cartilage, and sinew, contain water in a large proportion. Water enters largely into all the vegetable and animal substances used for food. Take a familiar example. That most valuable root, the potato, is composed of from seventy to eighty per cent of water. Digestion cannot be carried on in a healthy manner, without a large proportion of water. Without this liquid, the aliment could not be reduced to chyme; nor the chyme furnish chyle; nor the chyle become blood. Water fits this vitalized fluid to flow in all the vessels, and is conveyed to all the organs and tissues, in order that the appropriate materials may be deposited for their growth and strength. Water is also largely given out in the various secretions, and is indisputably necessary in order that a balance of the functions be preserved.

Water is the natural and most appropriate element to allay thirst. When man is left to the cravings of the principle of his nature—as when wandering in the desert, or on a wrecked vessel, or tossed and scorched with a fever—he snatches at water as the only beverage to quench his thirst, cool his system, and restore his decaying strength. Next to the nutritive fluid, furnished by the maternal bosom, water is the one taken with avidity by the infant; and if left to an unvitiated taste, it ever would be by the adult. And even he who, in the madness of his evening revel, drinks deep of the intoxicating bowl, and stoutly denies the fitness of water as a beverage, will, on the following morning, entreat for, and clasp the full pitcher of cool water, which only a few hours before he had so insolently derided. All the faculties of his nature now acknowledge the truth; and, but for the curse of imitation and evil example, their joint influence never could be mistaken, or overcome. When we say that water is the only suitable and appropriate drink for man, we are borne out by the facts in the case. Water is the only liquid which is essential to the formation, development, and support of his frame. It is equal to all the exigencies

of thirst, for the relief of present inconvenience, and of dilution, by mixing with his blood and other fluids, to prevent further suffering and disease. Water is found in all climates and habitable regions of the earth: and Providence has no where offered, in fountain, stream, river, brook, or lake, any liquid as its substitute. Water is fully adapted to the necessities of appetite, growth, bodily and mental exercise, and activity, even when the health suffers, and the body and mind are ill at ease. Where is the restorative liquid, or agent of any kind, which can revive and renovate like water. It is the beneficent menstruum and conductor of the elements of medicinal substances into the blood; and even when they are refused an entrance, water finds its way there, and not unfrequently performs the cure that is attributed to the medicine. How different the case with alcohol. If that be made the menstruum of medical substances, it soon abandons them, and can neither obtain for them entrance, nor find its own way into the blood; and if, in strange and anomalous cases, it is even introduced, its action is poisonous, and, if taken in any quantity, is deadly. It does not form a constituent particle of any tissue of the body, but retards instead of aiding those changes which the aliment undergoes before it is converted into blood: in a word, there is not one particle of nourishment in alcohol; and, save the slight stimulating effect it has on the nervous system in debility and prostration of the system, it is a certain and unfailing poison, if the use of it be persisted in.

*Hippocrates*, the father of medicine, shows his appreciation of water, by the title of the most philosophical of his works, viz: "*On air, waters, and situation*," in which this fluid comes after air itself, and constituting, by its use, one of the main conditions of health, and a chief cause of the modification of the physical condition and character of man. "And I wish," he says, "to give an account of the other kinds of waters, such as are wholesome, and such as are unwholesome; and what bad, and what good effects may be derived from water: for water contributes much towards health." (See *Adams'* translation of the works of *Hippocrates*.) *Galen* gives water a high rank, both as a drink and for external use in health, and the cure of disease. He says, "No person should touch wine, till they have attained the age of eighteen years:" but *Plato* says, "they should not touch it till they are twenty-two." Let me say, never touch it, nor any other spirituous potation, unless it be taken as a medicine, or sacramentally, and.

then but lightly. *Pliny* considered it "a great absurdity for man kind to bestow so much trouble and expense in making, artificially, such a variety of liquors, when nature has prepared to their hand a drink of so superior a quality as pure water." The learned *Boerhaave* lays down the axiom, "that food, not too fat, or gross, and water as a drink, give most firmness and strength to our bodies." *Hoffman*, the contemporary of *Boerhaave*, and who was distinguished as a practitioner, a teacher, and a writer, gives us the following, in praise of the value of water. "1st. Pure and light waters are agreeable to the nature and constitution of all men. 2nd. That no remedy can more effectually secure health and prevent disease, than pure water. It is serviceable to men of every complexion, and agreeable to persons of all ages." Again, he says, "water drinkers are more healthy, and longer lived, and have whiter and sounder teeth, and are more brisk and alert, than those who drink wine or malt liquors; it is, assuredly, serviceable in both acute, and chronic diseases. And, lastly, it answers to all indications, both as a preservative and cure." *Haller*, the physiologist, the natural historian, and the poet, a voluminous writer, and active in works of utility, gives his testimony by drinking nothing but water. *Zimmerman* justly remarks, "that water does not chill the ardor of genius." The sole drink of *Demosthenes* was water; and *Locke* and *Milton* were, also, distinguished drinkers of water, solely as a beverage. *Floyer*, a distinguished English writer, says, "Water resists putrefaction, and cools burning heat and thirst; and, after dinner, it helps digestion, exempts from various diseases to which free livers are prone, and renders men prudent and ingenious." *Bernard* tells us, that good water has a healing and balsamic quality in it. *Arbuthnot*, the scholar and wit, the cherished companion of *Swift* and *Pope*, and whose character has elicited so beautiful a comment from *Johnson*, infers, from the plenteous stock of water which all bodies afford, that it alone is the proper drink of all animals. The classical *Gregory*, who lived in what our vicious friends would call a liberal age, when alcoholic potations and compotations were general, declares, "that spring, and still more river water, the best and most wholesome drink, and the most grateful to those who are thirsty, whether sick or well: and also an aid to digestion, and a tonic to the stomach." The celebrated *Schene* says, "Water alone, without exception, is sufficient and effectual for all the purposes of the human wants as a drink." Without all possible controversy,



water was the primitive and original drink, or beverage; and it is yet the only simple fluid fitted for diluting, moistening, and cooling, appointed by nature. *Macquart*, after having mentioned the mixture of water with wine, says, "It is not the less true, that man has received, from the hand of his Creator, sweet and pure water, to be used, such as it is, without the mixture with foreign matters." He recommends, "men more especially addicted to science and letters, to make water their favorite drink; assuring them, that their ideas will be more precise, their judgment sounder, and their senses more delicate." *Londe* and *Levy*, recent French writers on Hygiene, are clear and emphatic on water as a drink. *Doctor Miller*, of New York, has showed, that those persons who were cast away, or detained in the regions of Hudson's Bay, Greenland, and Spitzbergen, who had been supplied with liquors and provisions, and was thereby enabled to indulge in indolence, and free drinking, have generally perished; while, at the same time, the greatest number of survivors have been found among those who had been accidentally thrown upon the inhospitable shores, destitute of food, and spirituous liquors; compelled to maintain an incessant struggle against the vicissitudes of the climate, to procure sustenance, and to drink water only. This fact is too decisive to need any comment. *Doctor Jackson*, physician general in the British army, has proved, to a demonstration, that, in a tropical climate, those who drink water only, are more certainly acclimated, and escape the diseases incident to the tropics, far better than those who use wine or spirits. *Doctor Mosely*, and *James Johnson*, say, "Acclimation is undergone most safely by those who drink nothing but water."

It may be asked, why all this long comment and proof upon the subject of drinking water alone? It is because I feel greatly desirous that truth should have its full force upon your minds; and, to this end, I have called to my aid some among the many eminent physicians and philosophers of all ages, and could, if necessary, add scores more to the list. Physiology teaches us, that the blood which courses in the heart, and arteries, and veins, is, in great part, the pure element; and, that the slightest approach to an admixture of this vitalizing fluid with the juice of the grape, or the alcoholic product of the still, is deteriorating and degrading, if not directly poisonous to man, both physically and mentally. Let the plain water drinker take courage, and assert his claim to pure and gentle blood, without fear of taunt, or disdain, from those who,



against all evidence, would claim patrician privileges on the strength of their attempts to poison their own blood. Let our noble-hearted countrymen, yeomanry and philosophers, remember, that our noble progenitors derived the iron will, and vigorous arm, by which they carved out for themselves distinction and honors, from inhaling the air of the fields and woods in which they were born, drinking the water of the nearest stream, eating the plainest food, and indulging in the most active exercise; part of which was the cultivation of the soil, and the amusements of the chase.

Poetry is on the side of the water regimen; for, surely, the pictures of the favorite retreats of the *Naiades*, with their kindred *Dryades*, and the associations connected with *Helicon* and *Parnassus*, and other spots devoted to the muses—the mountain rills and cascades, the gently flowing river, and streams meandering through meadows and fields of grain and fruits, and the lake embowered in woods; have furnished, and must ever furnish, more varied materials for the imaginative faculties of the poet and the painter, than all the invocations of *Bacchus*. What charming descriptions by the poets has not bathing alone given rise to. (See *Spencer* and *Thompson*.) Nearly all the writers which I have quoted, have, in imitation of *Galen*, laid great stress on bathing as a remedial agent in the cure of disease, as well as a Hygienic remedy.

We now come to the use of water as a remedial agent in the use of the bath; and it will be readily perceived, that, under the head of bath, we shall be obliged to notice all the different modes of bathing, at least so far as they are found profitable in the cure of disease. We shall mention, cursorily, the opinions of the ancients, and then come down to our own times and diseases. *Hippocrates*, the father of physic, “declares it to be useful in the cure of diseases, in some of them, when used steadily, and in others, occasionally.” But, in those days, as it is now, one great obstacle to the use of the bath was, and is, that but few families are provided with the conveniences necessary for bathing. *Hippocrates* generally used the bath by effusion. He sometimes directed friction to be used before the bath; and this is as current now as it was then, when the surface was cool, or cold, and the pulse low and weak. The bath, in these cases, should never be lower than 88° or 90° of Fahrenheit’s scale. No one should guess at this temperature, but have a thermometer, with a metal case, to

try the degree of heat. If the patient is bathed by the *douche*, it should be done quickly, and the patient wrapped in blankets, and covered in bed till he gets warm, or perspires freely. He should not use effort himself, but others should pour the water upon him, and then rub him, and put him to bed. Much will depend upon the previous habit of persons; if accustomed to bathing, they will suffer for the want of it when sick; if not accustomed to it, they can the better dispense with it.

In general, the warm bath is more profitable in *pneumonia* and pleurisy, rheumatism, &c., than it is in ardent fevers. Pains in the stomach and bowels, kidneys and bladder, are generally relieved by bathing in water at 90° of *Fahrenheit*. In those cases the bathing tub will be preferable; and the patient should remain in the water about fifteen or twenty minutes. The bath should not be repeated more than once or twice in twenty-four hours; and, if not well managed, it may prove injurious instead of beneficial.

By no one has the conjoined effects of water drinking and bathing been more systematically considered than by *Galen*. He declares the bath to be one of the chief parts of *Apothepia*, or system of perfect cure, which is completed by exercise and friction: and that "the stomach, if overloaded with food, or oppressed by residual crudities, is relieved by drinking a goblet of cold water. The same drink quickens the action of the bowels, provided there be no constriction from spasm, when warm water is to be used." He says, "Water given to the sick should be previously boiled, and then made cold with ice or snow. Cold water sometimes brings back heat, and often stops hemorrhage." Cold water and bleeding were his remedies for continued fevers. "Cold drinks are good in ardent and continued fevers." "When blood-letting has been omitted from want of skill, or timidity on the part of the physician, cold water is to be offered to the patient, and not one. but several goblets full—not in the beginning, nor height of the fever, but in its whole course. We give it the more freely, if the patient had been accustomed to use it in health, as it discharges the redundant and peccant humors by stool, vomiting, or by sweat." *Galen* recommends warm water to be drank, under the following circumstances: "Where the person is seized with syncope, small pulse, or cold sweat; if it vomit they are relieved." When there is spasm, with constriction of the bowels, he advises "to drink warm water." He says, "Hot water relieves vomiting, (not tepid water;) tepid water relieves headache from inebriety, drunken-

ness, cholera morbus, and hickup, also inflammation of the gums, fauces, and tonsils. Water always moistens, whether it be temperate or tepid, or even warm." We do not endorse all the above opinions of the physician of Pergamos, as *Galen* is sometimes called; but many of them are good, and none of them will do harm, if they do not exclude other remedies. *Galen* goes on further to say, "Water removes excrementitious matters from the skin; it is adapted to diseases of the voice; it is useful in putrid fevers; it cures ephemeral fevers; it removes pain in the eyes, and ophthalmia; sometimes cures plethora, and produces inclination to sleep." "The tepid bath is most serviceable to the young. The cold strengthens the body, and renders the skin dense and hard."

*Celsus*, who preceded *Galen*, in point of time, adopted pretty much the same practice in relation to bathing. He praises water in cases of weak vision, pain in the head, deafness, tremors, sinking pains in the joints, hysteria, hypochondria, diarrhea, and hemorrhoid. He cautions against cold drinks, when the individual has worked himself into a sweat, and after fatigue from a long journey. He directs those in health to use sometimes the warm, and sometimes the cold bath. This advice follows immediately after another admirable precept, and commentary. It is, to resort to labor, if the body is suffering from idleness: the former prolongs the period of youth; the latter anticipates the approach of old age. *Celsus* boasted of having made a freer, and more methodical use of the bath than his predecessors; and he especially commends it in low fevers, provided there be neither tympanitis, nor pain in the head. Also in disorders of the kidneys and digestive organs, and pains of the joints. When the word bath is used by him, we draw the same conclusions that we do from *Galen*, (namely) that the warm bath is intended, like those of the Roman *Thermæ*, unless he specifies any particular bath. *Celsus* was the first to advise immersion for the cure of hydrophobia. He went so far as to recommend, if the patient could not swim, that he should be thrown into a fish pond, and allowed to come so near drowning as to swallow, whether he would, or no, some of the fluid; and, if he could swim, that he should be held sufficiently under water, to compel him to take a similar draught; and so alternately immersing, and immersing the patient, until surfeited with water; by which means, he says, both the thirst, and the dread of water, will be subdued. He preferred the cold bath, in diseases of the skin; and restricted dropsical patients to a limited use of water as a drink.

*Asclepiades*, of Bythinia, was determined to suit opposite tastes. He was most liberal in prescribing wine, and gestation, even in violent fevers, laying this extraordinary paradox down as a maxim, that one fever was to be reduced by another. Who would have thought, that this basis, laid down by *Asclepiades*, would ever have become the basis of another system of the practice of medicine; another feature of which would consist in the assumption, that effects are produced without the possibility of the action, or indeed, the presence of the assigned cause—called remedies. Such, however, is the system of Hahnemanism, or Homeopathy. *Asclepiades*, to balance one extreme with another, was also an advocate for the use of cold water, both internally and externally, in hiccup, sour eructation, and nocturnal emissions.

When we speak of *Asclepiades* being liberal in the use of tonics, we must remember, that his directions were to take it the most for drink, equal parts of wine and water; and as we have no reason to suppose that the wines of ancient Italy were stronger than those of the modern, we can have an idea, from this, of the drink of the Romans.

*Oribasus* was the echo of *Galen*, and therefore, does not require farther notice here.

*Ætius*, who also, in imitation of the latter, directed a bath of oil in protracted fevers, convulsions, retention of urine, and to relieve lassitude and nervous pains. The bath of oil was formed, by adding a fifth part of heated oil to a bath of water.

The Arabian physicians give us many precepts regarding the use of the bath; to which their Greek studies, and their own climate and diseases, would naturally prompt them. *Rhazes* was a strenuous advocate for the use of the water cure. He believed the bath to be useful in nearly all diseases. His memorable treatise on small-pox and measles, contain precepts for the treatment of these diseases; a neglect of which, by his successors, even to the present day, has been productive of a great increased mortality from those scourges of the human race. Among these precepts are urgent recommendations to the free use of water. (See *Ballard Stokes'* lectures on the practice of physic.) *Doctor Greenhill*, the last translator of *Rhazes'* works, gives the following as *Rhazes'* preventive against small-pox. He says, "When it prevails in a place, in the middle of the day, let the patient wash himself in cold water, and go into it, and swim about in it. When the precursory fever shows itself, use extingvents; first of these is blood



letting, and in aid of it, the following process of aqueous potations: let the patient drink water, made cold by snow to the highest degree, several times, and at short intervals, so that he may be oppressed by it, and feel the coldness in his bowels. If, after this, he should continue to be feverish, and the heat should return, then let him drink it a second time, to the quantity of two or three pints, or more, and within the space of half an hour; and if the heat should still return, and the stomach be full of water, make him vomit it up: and then give him some more. If the water finds a passage, either by sweat or urine, then you may be sure the patient is in a fair way to be restored to health; but if you do not see that the water has found a passage, or you find that the heat is increased, and returns as it was at first, or even more violent, then omit giving the cold water in large quantities, at several times, and have recourse to the other extingquents, which I have described," (to-wit, bleeding.) There are here, certainly, some incongruities in his practice. But, he says further: "That the eruption of small-pox, and measles, after the fever has fairly set in, is accelerated by well wrapping the patient up in clothes, and rubbing his body; by keeping him in room, not very cold; and by sipping cold water, a little at a time, especially when the burning heat is very great: for cold water, when it is sipped a little at a time, provokes sweat, and assists the protrusion of the superfluous humors to the surface of the body." He further recommends the "exposing of the body of the patient, except the face, to the vapor of warm water, which is to be quickly rubbed off, as soon as it is deposited on the skin. Much oppression and anxiety, with an imperfect coming out of the eruption, will be relieved by giving to drink from time to time, warm water, either alone, or that in which there has been first boiled the seeds of sweet fennel and mucilage, and others of the same kind." Such is *Rhazes'* treatment of small-pox and measles, much of which is very good.

*Aricina* has enlarged on the use of baths; strengthening his own views by the writings of *Galen*, *Rhazes*, and others. He recommends the daily bathing of infants in tepid water: a practice our city ladies in America, especially, attend to. He also describes the advantages that arise from a sand bath in the sun, in order to bring out sweat, carry off superfluous humors, and for the cure of asthma and dropsy. He advises friction, and inunction in the bath; but he prohibits the drinking of cold water during this time. He recommends aqueous drinks for colic: "they



wash out the stomach, cause alvine evacuations, and remove pain."

*Meshues* and *Haly Abbas* are the advocates of bathing in a great variety of diseases. The former prescribes the addition of various plants, according to the indications of the case. The latter, in accordance with all his predecessors, tells us, that the proper time for the bath is after exercise, and before eating: thus used, it moistens the body, strengthens the vital heat, promotes digestion, opens the pores, mitigates pain, and dispels flatulence." He adds: "A short continuance in the bath warms and moistens the body; but a long continuance warms and dries it." *Alsaharavius* is very precise and eulogistic on the use of the bath. He says: "They are to moisten the body, open the pores, dispel flatulence, remove repletion, procure sleep, relieve pains, fluxes of the bowels, and lassitudes, and restore lean bodies to plumpness and obesity; if used after a full meal, they soften contracted limbs, and moisten dry bodies." He adds: "The evil effects of the bath, when it is misapplied, are prostration of the vital powers, syncope, and determining of the humors to weak parts." (See commentary by *Francis Adams*.) Coming nearer to our own time, we notice the Italian and Spanish practice. Within the last two centuries we meet with prominent examples of the application of the watery regimen for the cure of diseases, including fevers of the worst grade. In the early part of the last century, appeared the remarkable works of *Lanzani* and *Floyer*, and accounts of the treatment of fevers by the Sicilian *Fra Bernardo*, and the Neapolitan *Cavillo*. Not having these works, we must rely on *Dr. Forbes*, as we find his review given in the *British and Foreign Medical Review*. "According to *Lanzani*, the true method of using cold water consists almost entirely in its internal administration, in very large doses, in certain stages of certain fevers. His work is very learned, methodical, and comprehensive. It is divided into two books: the first, devoted to an explanation of the causes, symptoms, complications, and nature of fevers; the second, showing, that copious imbibitions of cold water, is the best means of combating the symptoms on scientific grounds; and, consequently, the best remedy for fever." This is, obviously, an argument somewhat theoretical; but, "is supported by a chapter of cases, backed by the opinions of a host of learned doctors, the author's predecessors. *Lanzani*, appears to have had no knowledge of the external use of water; nor of its application to the cure of chronic diseases. He used it

in combination with drugs." *Fra Bernardo*, priest and capuchin, at the very time when *Lanzani* wrote, was carrying out the use of cold water to a considerable extent. He was the son of an apothecary, whose title extended to chemist and doctor. *Bernardo* acquired the surname of the cold-water doctor, and won no little reputation for the cure of diseases by the use of ice water: namely, weakness of the chest, convulsions, palpitations, obstinate dyspepsia, dropsy, diarrhea, hemorrhage," &c. "He gave three goblets of ice water in the morning, and sometimes thirty-six in the course of the day; the quantity ranging from a pint to a pint and a half at a draft. He applied ice externally in cases of gout and rheumatism, and to the parts in which great heat was experienced; but he would not consent to the use of this remedy during the great heats of summer: and he avoided the inducing of sweat, seeking, in its stead, to act on the bowels and kidneys. During the first days of treatment, almost all food was withheld from the patient: sometimes the yolk of an egg was allowed; and afterwards, when there was weakness, roast chicken, or pigeon."

*Cavillo*, a Neapolitan professor, a few years after, carried out what he called the watery diet, in the treatment of malignant fever, which prevailed at Naples. He gave the patient no other drink than water, cooled by snow; a pint, or two, every two hours, for several days—seven, eight, or ten. During this time, no kind of aliment was taken; and when it was finally allowed, it was of the lightest kind, such as panada. If hickup supervened, it was met by the free ingestion of cold water, and it was found to be relieved by such a drink. So soon as sweat supervened, the beverage was omitted. *Cavillo* did not approve of cold bathing; but he directed snow to be locally applied to the most sensitive parts, and where there was great determination to a particular organ. In cases of delirium, during the progress of the fever, he directed snow to be rubbed over the head. (See transactions of the Royal Society.) The Italian practice with the watery regimen, *dieta aquosa*, is traceable to the Spaniards, by whom it was introduced into Naples. *Samoilowitz*, in his history of the plague at Moscow, used, with signal success, the watery regimen, in some of the most desperate cases of this disease, and at a time when death seemed certain. His treatment consisted in friction of the body with pounded ice, and in the use of cold acidulated drinks.

This subject grows upon our hands, but we must abridge our remarks, and close with a brief notice of some of the English

writers, on the watery regimen. Reverting to the works of *Sir John Floyer*, already quoted in this chapter, and to *Baynard*, his friend and associate, we find some curious examples of the extent to which the watery regimen has been carried. *Floyer's* name is almost universally associated with the use and fame of cold bathing. He says, expressly, "I am very well convinced, by many trials, about cold bathing, that they succeed best, who not only drink the cold water before they bathe in it, but also continue the water drinking long after." Again, in reference to cold bath in gout, he tells us: "But in these, and other defluxions, without water drinking, and a cool purge of salt, and a temperate diet, no great good can be expected." Still further, in the same letter, we read, "I cannot believe that cold bathing can help any defluxions, such as the asthma, without water drinking; and, in recent disease, neither can cold baths do any good where the *vicera* are decayed." *Dr. Baynard* remarks: "Not only cold bathing externally, but internally; that is, drinking cold water, is of the greatest use and moment to human life, if the water be good and well chosen."

In the practice of these authors above quoted, and the ancient practice of bathing, we see an indistinct basis of the modern practice. I wish we could say, systematic doctrine of hydropathy. By pursuing the above authors, we find the cold bath, wet sheets, and sweating, and even eruptions on the skin, of hydropathic record, are the direct counter parts. We find the practice of immersion and drying in shirts, practiced by gentlemen of the turf, when they wish to lighten the rider. They dip the rider's shirt in cold water, and after it is put on very wet, lay the person in warm blankets, to sweat him violently, and he will lose a pound or two. In another part of his work, *Sir John* remarks, "Immediately after a cold bath sweats are produced, if we commit the patient to a warm bed, but a longer use of cold baths stops all evacuations."

*Doctor Nathan Ellison* describes the process of cold bathing for the cure of rickets in children. The course lasts for a fortnight, or longer, (in the months of June and July) intermitting a day or two, or more, if the child be very weak. The course consists in quick immersions, with their shirts and night caps on." "All immersions are to be dispatched as quick as may be, that, so the child may not continue longer in the water than is necessary; that is, till his body, and shirt, and night cap, be thoroughly wet." The next stage of the treatment is thus described: "As

soon as the children are dipped, they (with their wet clothes on,) are wrapped in warm blankets, over their head and whole body, and put immediately to bed, which instantly puts them into a violent sweat. In this condition they lie till towards morning, when their clothes are taken off by degrees, so that they may cool gradually, and then they have dry shirts, and head clothes put on; the same shirt and night cap in which they are dipped are used all the time of their dipping, and are only dried." "Although they may, for a while, be weaker after this treatment, yet they recover their strength gradually, by the help of nutritive jellies, &c., in as much, that about the fall of the leaf, they are perfectly cured, or sensibly better. If one year's dipping proves not sufficient, it is repeated the next year, which generally answers expectation."

*Sir John Floyer*, in his address to the College of Surgeons of London, in adverting to the Roman practice of bathing in winter, gives the following narrative: "In Staffordshire, at Willow Bridge, they have a more bold practice than either the Greeks or Romans used; they go into the water in their shirts, and when they come out they dress themselves in their wet linen, which they wear all day, and much commend that for opening the pores and keeping themselves cool; and, that they do not commonly receive any injury, or catch any cold thereby I am fully convinced, from the experiments I have seen made of it." *Dr. Baynard* says, "It was the custom at St. Mongah, the cold springs in Yorkshire, for the country people, especially those that were superstitious, to carry as much of the saint away with them as they could; and hence, they not only bathed, but, when they came out, put on a wet shirt, or smock, and then walked, or rode home, and let their shirts dry upon their backs. An unexpected inconvenience was said to result from this practice, in an exuberance of animal feeling and spirits. The very reverse of the penance which the bathers meant to impose upon themselves."

In connection with these water practices, I will mention here, the practice of an English nobleman, the *Earl of Panmure*, who died in January, 1782, aged eighty-two years. He was accustomed, till a short time before he died, every morning previous to dressing, to raise himself naked from his warm bed, and instantaneously wrap himself in a sheet, just dipped in cold water. It is well authenticated, says the narrator, that by adopting the same method, a person recovered strength from a long continued state of debility,



and relaxation of constitution. (See *Dr. Molleous'* remarks on longevity.) An eruption following the use of the cold bath is mentioned more than once by *Floyer*, who says, "I observed that some hot tempers had a rash produced by bathing, and they were eased of pains thereby." *Sir Henry Conningsby*, a patient, says, that "the first time he went into the cold bath, (a spring,) it blotched him in one place, and so every day, more and more, by pimples rising and then dying away." *The seat bath*, or what is now commonly called the *sit bath*, or hip bath, has of late acquired vogue, as part of the true water cure, and, by some superficial readers, is looked upon as a novelty. Professional men need not be told of the error of such belief. Perhaps, the cure related by *Baynard*, in one of his letters to *Sir John Floyer*, may not be known to some of them. I will give it here.

It was a person in the prime of life, not above twenty-nine or thirty years of age, who had suffered a long time from seminal weakness, the result of great venereal excesses. Were I addressing myself to the profession exclusively, I should be tempted to give the introductory part of *Dr. Baynard's* letter, with its massive quaintness, and figurative yet quite expressive language and allusions. "The patient was directed to go into the country, out of sight of any women, and find out some very cold spring or river; to plunge over head, and then put on his shirt, coat, and hat, to prevent catching cold from wind or air; and sit to the waist, night and morning, for a month, and drink nothing but milk, twice a day, sweetened with sugar of roses; at noon eat well roasted mutton, with cold sallads, as cucumbers, lettuce, purslain, &c., and drink nothing but spring water, with a little claret wine: some topical applications of vinegar and claret wine, was also made at night." Which directions he punctually followed, "and in less than fourteen days, he was as well as ever he was in his life." An improvement on this simicupium, in which the bather wears his coat and hat, is that other fashion related by *Dr. Baynard*, on the faith of his friend, *Dr. Savory*, namely, to fish up to the chin in water for an hour or two. A few days since, writes *Dr. Savory*. "Talking with a country fellow, of tolerable sense, about what would procure a stomach to eat: one proposed *taking the air*; another *riding*; another *old hock*. Come, come! says my fellow, I have tried all these ways you talk of, but nothing is like going a fishing up to the chin in water, for an hour or two; that will get you a stomach, I'll warrant you. Nor am I dry."



I do not know whether my eloquent friend, the "American editor" of *Walton and Cotton's Complete Angler*, who has written so well, and so learnedly on the "gentle art," in his Bibliographical preface, to a recent editor of that work, will deem the countryman's fashion an improvement. Certain it is, however, that it is entitled to much of the praise given to angling by *Sir Henry Walton*, as recorded by *Walton* himself, and repeated in the preface. "A rest to his mind ; a cheerer of his spirits ; a divester of sadness ; a calmer of unquiet thoughts ; a moderator of the passions ; a procurer of contentedness, and, that it begat habits of peace in those that practiced it."

#### CURATIVE POWERS OF WATER AS A DRINK.

Of the curative powers of water as a beverage, the proofs on record are numerous, and happily continue to be a matter of continued experience. To the instances already adduced, I will add a few more.

*Baynard* gives the case of a young gentleman, from the injuries of tobacco and strong drink, recovered by drinking water. "This person, from a vivid and florid state of health, became pale and wan ; had strange cold sweats, with loss of appetite, and great depression of spirits. His physician advised him to forbear strong drink, to drink spring water, night and morning, eat a raw apple or two, and take the air in a coach, or on horseback ; all which he punctually observed, and he was as well in a month, as he ever was in his life."

I leave to commentators to determine, how far abstinence from strong drink, or the taking of water as a beverage, and fresh air and exercise, contributed to the restoration of this young gentleman's health. In any view of the case, the cause of sound hygiene will be the gainer.

The reference made to tobacco by *Baynard*, probably suggested his introduction of the remarks of the learned *Kirkringius*, entitled, "*Nimus Tabaci usus Novius*." They are fit company for *King James'* counterblast against tobacco : and certainly, are any thing but encouraging to the smoker. "If he have regard for his tongue, which becomes blackened and almost poisoned ; his wind-pipe, which is converted into a chimney, choaked with soot ; his lungs dried up, and almost friable ; his liver inflamed, and gall bladder obstructed ; his bowels clogged with black carbonaceous matter." Behold, says the pitiless *Kirkringius*, "the medical fruits of this frequent

suction. I have not given the entire picture, in which *Vulcan*, *Charon*, and *Plato*, and the *Platorian* domain are introduced, with their lurid hues and gloomy attributes."

The following case of the efficacy of free water drinking in dropsy, is thus quaintly related by *Baynard*. I give his introductory remarks. "*Sir Thomas Witherly*, when he was president of the College of Physicians, London, was pleased to entertain some of the fellows of the board with the following most surprising story of an hydropical cure. That water should repel water, and that a drowned man should be brought to life by being more drowned, is a miracle beyond any of *St. Winifrid's*." Here follows the case: "A certain wine-cooper, that had been a free liver, fell into a jaundice, and acites, (dropsy.) He applied for help to *Sir Thomas Witherly*, then physician to *King Charles the Second*, who, as he said, treated him in all the usual methods practicable in such cases, but nothing would do. He made little water, grew drowsy and asthmatical, in so much, that *Witherly* grew weary of his patient; and, foreseeing that he would soon die, desired some near friend to pronounce sentence; for those who are *ajutoris vista*, should not be *nuncia mortis*: in short, this man was prodigiously swelled—belly, back, sides, thighs, and legs. Thus being passed all hope, and forsaken by his physician, and given over by his friends, he desired his wife to let him die at Saddler's Wells, at Islington, to which she consented; and when there he told her, in that he had always been a kind and loving husband to her, that she would grant him one request, which was, that having on him an inextinguishable thirst, she would let him drink his fill of those waters, and then he should go out of this world well satisfied that she truly loved him; and, if she denied him, he should die a miserable man both in mind and body. She, seeing him so resolved and bent upon it, and considering all other means failed, consented: and to the best of my remembrance, *Sir Thomas* told us, that from between four in the afternoon, and nine or ten at night, he drank fourteen quarts of water, and all that time made not one drop of urine; he sank down in the chair wherein he sat, dead, as they all thought, in a cold clammy sweat; thence being laid on the bed, in half an hour's time, they heard something make a small rattling noise like a coach on a distant gravelly way, and soon after he began to pass his water, and passed in an hour's time, seven or eight quarts, and had also, from the weight of the water, two or three stools. He began to speak, and desired a little warm

sack, which they gave him. He fell into a profound sleep, in which he both sweat and dribbled his urine all that night. The next day he drank by degrees, about four or five quarts of water, and had two extra stools, thin and waterish; but still discharged his water, and drank on, more or less, for five or six days together, taking all that while nothing for food, but thin mutton broth, and sometimes a little sack, and so recovered."

Now, no man in his senses would have prescribed such a remedy for dropsy; which shows how little we know of nature, and the great uncertainty of our art.

The first part of the eighteenth century was prolific in clinical trials, and written essays, showing the virtues of the watery regimen. We have already seen this to be the case in the Spanish and Italian practice, and in the works of *Floyer* and *Baynard*. I have next to advert to additional testimony during the same period, derived from other English, and also some French writers. So, that the water cure would seem to have been almost as much in vogue, in different parts of Europe, at that time, as it is now under a different name, and from apparently a novel source. The intelligent reader can readily see, now, how small are the grounds for the pretensions of the hydropathic, or any other school of the day, to originality, either in hydrological theory or practice.

*John Hancock*, a clergyman, published in 1722, a little tract, called "*Frebrifugum Magnum, or common water the best cure of fevers; and probably the plague.*" His attention had been directed to the subject, from his own sufferings from violent fever, with cough and jaundice. The recommendation of a friend, for him to drink water, into which pulverized amber had been put, made him suspect, after he had followed the advice, that the water was the active agent. Accordingly, he took this fluid alone, in the evening on going to bed, and after his first sleep; and he continued to drink several times, for some days; and found himself each morning afterwards in a gentle sweat. On the fourth morning he was well.

This worthy rector of St. Margaret's, Lothbury, and also prebendary of Canterbury, and chaplain to his Grace the Duke of Bedford, next tried the remedy on his son, who was suddenly seized with violent fever, and on whom it induced a copious sweat, followed by a remission. A return of the disease, on exposure to a current of air, was met by the same treatment with similar effect, and this time an entire cure.

Cases of the cure of ague, by drinking cold water, are introduced by *Mr. Hancock*. He treated successfully, by the water drinking, cases of scarlet fever, small-pox, and measles, occurring in his own children. In the measles the eruption had struck in, (as the common expression is,) and the little patient seemed to be at the point of death. In this state, the father administered water, by wine-glass-fulls every few minutes, until the fourth, when the measles came out again, and looked very red: the patient fell into a quiet sleep, of four hour's duration, and awoke entirely relieved. *Mr. Hancock* believes the water to act chiefly as a sudorific in the cure of fevers. Agues he cured by sweating with cold water, when the patient began to sweat, he advised a discontinuance of the cold water. Toast and water, in his own case, he found to take off any fatigue or weariness, sooner than any strong wines, strong ale, small beer, warmed coffee or tea, or any other liquor that he knew of.

I shall next notice *Mr. John Smith*, on the "*Curiosities of common water*," in a small tract. Its epigraph is:—

"That's the best physic which doth cure our ills,  
Without the charge of apothecaries bills."

The sentiment, all will agree, is better than the poetry. *Mr. Smith* says, "He had an experience of forty-four years in the use of the cold water remedy;" and that "water, in some cases, may be styled an universal remedy, since the diseases it either prevents or cures may have this remedy applied to all persons, and in all places where men do inhabit." *Mr. Smith*, to strengthen his asseverations, enlists the opinions of a host of learned doctors: among whom I may mention *Dr. Manwaring*, in his *Method and Means of Enjoying Health*; *Keill*, *Pratt*, *Duncan*, *Sir Thomas Elliott*, *Allen*, *Sennertus*, *Harris*, and *Van Hayden*. *Mr. Smith* adds his testimony to that of *Mr. Hancock*, in favor of the curative effects of cold water, freely drank in the cure of small-pox. The cases were two of his own children. He refers to the opinion of *Dr. Betts*, who being consulted in a case where the eruption did not come out kindly, "ordered two quarts of cold water to be drank as soon as could be, upon which they came out according to expectation, and the patient did well."

Water is styled by *Sennertus*, the balsam of children. "The drinking of it by the mother, being one of those things whereby children may be strengthened in the womb, and will prevent the



injuries that are done by drinking strong liquors ; which *Samson's* mother was not allowed to do ; for she was commanded “ *not to drink wine or strong drink.*” Judges xii. 4.

*Mr. Smith* lays down a pathological doctrine, which has been the basis of more than one popular system since his day, viz : “ The stomach being the place where distempers do first begin ;” and from it he deduces his favorite mode of treatment, for all surfeits, or disorders that follow after much eating, under which he includes apoplexy. It is “ to bring on vomiting by large and repeated drafts of warm water, aided by tickling the throat with a feather, or the end of a small stick covered with the folds of a linen or muslin rag.” He adds a piece of advice, similar to that given by *Galen*, and practiced by *Baynard*, namely, to dilute the peccant matters, and carry them off along the first passages, “ by the suffuces from indigestion, and taking a pint of water when they find themselves ill from eating, and do so every three or four hours, eating no more till they are hungry.”

*Cheyne* says, “ Gouty persons, after excess, either in meat or drinks, *should swill down as much fair water as their stomachs will bear*, before they go to bed, whereby they will reap these advantages—*either the contents of the stomach will be thrown up*, or both meat and drink will be much diluted, and the labor and expense of spirits in digestion much saved.”

*Mr. Smith* is an advocate for large potations of cold water, in fevers of a low grade, in which diffusible stimulants are usually administered. The first sensible effect of these draughts, he says, “ is a profuse sweat, which is soon followed by a remission, and afterwards, a complete solution of the fever.” We may add our testimony to the truth of this assertion. Grief and melancholy, so great as to suggest self-destruction, were entirely dispelled in *Mr. Smith's* own case, by *drinking a pint or more of cold water*. This leads him to advance another well founded piece of gastric pathology : “ That the stomach sympathizes with the mind.” (I would say, the mind with the stomach.) Though the like success may not follow this practice in others ; yet, certainly it is, that their prospect of restoration will be much more favorable by the use of water, than by that of vinous or distilled liquors. *Thoden* also gives his testimony in favor of water drinking, for the cure of melancholy.

*Doctor Brown*, the author of a treatise *on the cures performed by the cold bath*, shows that *madness and melancholy*, with all their



retinue, may find better effects from bathing in cold water, than from other violent methods, with which people so afflicted are now treated. (We treat such cases now, in America, by the mildest means with success.) He says: "That which will make a man sober in a minute, will certainly go a great way towards the cure of a mad man in a month." "Now, it is most certain to my own knowledge, that, if a drunken man be plunged over head and ears in cold water, he will come out of it perfectly sober." He relates a case of a man "*raving mad*," who was bound in a cart, stripped, and blind-folded, that the surprise might be the greater, who received from the height of twenty feet, a great fall of water on his naked body, and continued under this, as long as his strength would permit; and after he returned home he fell into a sleep, and slept twenty-nine hours, then awakened in as quiet a state of mind as ever, and so continued for twelve months."

I cannot, in a single chapter, follow *Mr. Smith* in his enumeration of all the forms of disease in which the external use of cold water, either by a general bath, or topically applied, has been found serviceable. He terminates his treatise, however, by this wholesome piece of advice: "That fasting, rest, and drinking water, will cure most diseases." If the first feelings of uneasiness, precursory to an attack of any of the forms of fever, that commonly prevail in our country, were made a signal for obeying the above precept, there is no doubt, that the disease would be often prevented; or, if it were to come on it would be comparatively, mild and easily treated. Water is the only true drink; it is the one which dilutes and qualifies all that we eat; which cleanses out the stomach, and excites the appetite; it is the drink which preserves the fluidity of the humors of the body, and while giving flexibility and pliancy to the vessels, also preserves the health.

In order to make this chapter as complete as the limits of our space will allow, we shall now give some account of the topical application of water in the cure of wounds, bruises, sprains, &c. And, for authority, we may go as far back as *Hippocrates*, the father of physic.

*Hippocrates*, in his Aphorism, recommends an abundant flow of cold water, on painful and swelled joints, when they are not ulcerated; also in gout and rheumatism, and convulsions, as a means of relieving pain. He advises a similar application in cases of spasms, luxations, and fractures, in order to prevent the swelling

consequent on these accidents. *Paré* tells us of a victim of gout, who used to fill his boots with cold water after he had put them on, which enabled him to walk to his library, and select such books as he wanted to examine in the prosecution of his studies. *Cocchi*, *Sanctorino*, *Marziano*, and *Berthy*, all give their approval to the utility of applying cold water to a gouty limb, during the paroxysm of pain and swelling. *Lauret*, the celebrated *Harvey*, and a great many others, have practiced it on themselves. *Mr. Smith* found that sprains were entirely freed from all swelling and pain, by putting the part into a vessel of cold water for about two hours. If it should be a joint that could not be placed in the water, cloths were kept constantly wet with cold water, and applied over the joint. When inflammation of the joints were produced by external violence, cold ablution, according to the intensity of the injury, or the facility of applying the water, have been at all times freely used. The recency of the accident, and the heat and pain of the part, are the chief indications for our applying cold water in a full stream. More stiffness and tumefaction, constituting the second, or more advanced stage of the affection, will demand a recourse to the warm, or even hot bath. After a violent exertion, a person is seized with acute pain in the back, soon followed by heat of the corresponding region; frequent sponging of the parts with cold water is a very soothing and salutary application; frequent ablutions of the loins and groins with cold water is good in flour albus. It is also good to relieve the irritation produced by the piles. In the various forms of sore eyes, a continued application of cold, or tepid water to the eyes is very serviceable; it allays pain, and removes inflammation. Warm water, topically applied, frequently relieves pain of the joints when swollen. Ice water has often relieved neuralgic pains. It is also a good application to the head, in inflammation of the brain. In every variety of hemorrhage, from the mucus surface, as from the nose, throat, lungs, stomach, bowels, uterus, and urinary passages, cold, by means of ice and cold water, applied both externally and internally, have given the most prompt relief. In cases of uterine hemorrhage, bleeding from the bowels, and bleeding piles, cold effusions, as a sheet wet with cold vinegar and water wrapped round the patient, and frequently renewed, is eminently serviceable; though, in such cases, we are generally satisfied to make a local application of cold water. But in doing so, this precaution must always be observed, the skin must be hot, and the pulse full. The ancients

placed the feet in cold water to relieve hemorrhage from the womb; and they applied cold wet cloths over the stomach, to relieve vomiting of blood, and gave injections of cold water. Injections of cold water has been used time immemorial, for the removal of costiveness. Should cold injections chill the patient, the water should be luke warm. When the sick man is burning with fever, tossing and turning from side to side, nothing calms and relieves him so quick as sponging him with cold water, and a cold water injection. When, on the other hand, the system is depressed, and the indications are to raise the heat, injections of warm, or even hot water, will often arouse him, and equalize the heat on the surface. In irritable bladder, injections of cool water into this organ gives marked relief. The present improved injection pump is the best apparatus now known for the cure of these remedies; they are portable, and can be conveniently carried in a travelling bag, or even in the pocket.

The teachings of *John Hunter*, by his pointing out the imperative processes pursued by nature in the healing of wounds, contributed not a little to simplify their treatment. An improvement in this respect had been, it is true, begun by his predecessor, *Pott*; but still, surgeons were, till late years, indeed, we may say, many of them are even now, backward in having recourse to simple water dressing in place of poultices, unguents, and plasters, in the treatment of wounds.

A brief outline of the history of water dressing in surgery, it is hoped, will not be deemed unacceptable by my readers in this place. The lovers of classical lore will at once refer to the example of *Patroclus*, at the siege of Troy, who, on the occasion of the wound received by his friend *Eurypilus*, dressed it with water, after he had withdrawn the javelin. In modern times, the use of water as a vulnerary, first obtained some vogue in Italy; but it was first freely adopted by the French military surgeons, who formally acknowledged the great utility of this remedy, and showed its superiority over the farago of applications with which vain learning had at different times tortured the wounded soldier. *Ambrose Paré* thought himself abundantly rich, when he became possessed of a secret for preparing Italian *balsam*, (*oleum catelorum*,) which was to heal all kinds of wounds. But when, afterwards, he saw simple water in the hands of a quack, named *Doublet*, at the siege of Mentz, in 1553, produce equally wonderful cures, with those he obtained with the use of his *balsam*, he could neither conceal his disappoint-

ment, nor his mortification. He thought there must be something supernatural in such surgery as this, which he first refrained from adopting on account of religious scruples.

But in an age of superstition, such prejudices need not surprise us, more especially, when we learn it was common to attribute the success of the water practice to peculiar sympathies, or magical incantations, which could only be wrought by a privileged few. *Paré's* good sense soon enabled him, however, to discover and declare, that the true vulnerary was the water, and not the mummery. The Latin essay of *Michael Angelo Blondi*, on water, as a newly-discovered remedy in gun shot wounds (1542,) served only to fix attention as it were, but for a moment on the subject. The view taken of it by this author was natural—he spoke merely of simple water, which could not be supposed to interest the people, nor produce in them the same confidence in its curative powers, as conjured, or magical waters.

In this respect, we do not find that mankind are much altered in this day, in their credulity, and love of the marvellous. Tell them of the curative effects of pure water, and they smile incredulously, or perhaps scornfully. But render it impure by some impregnation, either mineral, vegetable, or alcoholic; then call it *aqua mirabilis*, or *Balm of Gilead*, or any unmeaning, but, yet sounding title, and it is eagerly sought after, purchased with much silver, or fine gold, and swallowed with a faith which works prodigies in the way of cures. *Gabriel Fallopius*, of Venice, and *Felix Palladius*, endeavored to do away with quacks and conjurers, and exhibit simple water as a remedy, meriting the attention of the regular surgeon, and to be employed by varying the temperature according to the nature of the wound. *Joubert* and *Martee*, of France, exerted themselves in the same spirit, and with such success as to obtain for the practice the formal title of the university of Montpellier. But nature and common sense were not long allowed to bear sway. *Van Helmont*, with his sympathetic dressings—*Glielenius*, with his magic cures—the devotees, with their plasters, from the hand of God, gradually cast the water practice into oblivion; or, if it were had recourse to, some wonderful mixture was introduced into the water; such as the powders of *Sir Kenelin Digby*, which had all the credit of success, but which, in fact, was due alone to the simple fluid.

In Italy, owing to the warmth of the climate, and the necessity of frequent recourse to water, for the purpose of ablution and



drink, the water regimen, in diseases and wounds, was less corrupted by the jargon of schools, and the tricks of mountebanks.

In 1752, *Lamorier*, in France, attempted once more to direct the attention of his countrymen to the subject, in an essay on the use of common water in surgery. By a fortunate co-incidence this publication appeared at the time when all France, and even Europe, was made acquainted with the wonderful success of the practice in the case of the *Duke of Orleans*, who was cured of a wound in one of his hands, which at first seemed to threaten the most serious consequences, and even to require the amputation of the arm; but was cured by the free use of water alone, by immersion, and fusion on the part affected. Were the remedy less simple and natural, and to be obtained with less facility, I should not think it necessary thus to show the revolutions which it has undergone in the professional world, nor to write in its support the names of *Sancassani*, in 1753—*Caldani*, in 1767—and *Bonneken*, whose sage efforts were, however, insufficient to preserve it a place in clinical surgery. It fell into neglect, if not into disrepute, for a period of nearly thirty years. *Danter*, in 1780, published a valuable essay on this subject, which abounds in sound precepts and erudition. But it is doubtful whether his labors would not have been as unsuccessful as his predecessors, had not a fortuitous circumstance restored water to its former high rank among surgical remedies. *Percy*, the distinguished military surgeon, from whom I have borrowed the preceding details, (*See Dictionary of the Science of Medicine*,) tells the story, as follows: “On the 4th of June, 1785, whilst trials were being made of the comparative merits of the cannon of two rival founderies, several artillery men, among whom was *Pichogree*, then a common soldier, were wounded in different parts of the body. The chief surgeon, *Lombard*, a man of great merit, dressed the contused and lacerated wounds in the usual manner. A miller of Alsace, having heard of the accident, went to the governor of the province, and succeeded so well in persuading him of his ability to render water an infallible cure for all sorts of wounds, that the worthy magistrate gave orders to have the wounded soldiers placed under the charge of the miller, and to be dressed exclusively by him. This surgeon immediately, by intuition, set about washing those wounds with river water, to which he added a pinch of powder, at the same time making divers signs, sometimes with one hand, and sometimes with the other, and muttering some unintelligible words. The powder was nothing but



common alum; and the additional virtues imparted to the water by his muminary may be readily appreciated. After the wounds had been well washed and bathed, the miller covered them with lint and linen, which were readily furnished by the ladies of the city, and which he dipped in the water, still gesticulating and uttering the magical words. We, says *Percy*, (who was one of the surgeons of the garrison at the time,) were not allowed to be present at the dressing, except at the twelfth, twentieth, and thirty-first days, in order to assure ourselves of the state of the wounds. Those without much pain, or any other dressing, except the prepared water, all cicatrized in six weeks; although immediately after the accident, the surgeons hesitated about amputating the hands of six of the artillery men, which were much lacerated. The wounds were only exposed once a day; but every three hours they were wet with the water, moderately cold, which the miller called his *holy water*." *Percy* makes a remark, which is a very natural one, and also instructive, that there was some deformity of the hands and fingers of the wounded, for want of suitable support by splints, and graduated bandages. This lesson was not lost on the French surgeons, who found simple water as successful in their hands, as in those of the miller, with all his charms and secret powder; while their entire treatment was more successful than his, on account of their using water, either cold or tepid, according to the condition of the wound, and of their calling in the aid of posture and splints, to prevent pain and deformity. It is in this way, that true science ever shows itself superior to empiricism. *Percy*, thus early acquainted with the curative properties of water, did not fail to make liberal use of the remedy in the campaigns of the French armies, during the war of the revolution. The waters of the chief rivers of Europe, from the *Moselle*, to the *Guadalquivir*, have often alone formed the dressing of the numerous wounded soldiers of these armies. In Egypt itself, *Larry* found the river *Nile* to furnish a vulnerary to the most terrible wounds. Professor *Kern*, of Austria, while praising the use of water in the treatment of wounds, has erred in claiming for himself the honor of the discovery. *Percy* regards water as especially efficacious in lacerated wounds of the membranous and eponeoratic expansions, and also of the tendons. He tells us, that he has often succeeded by the external use of this fluid in saving limbs which were so dreadfully lacerated, that it seemed imprudent to defer their immediate amputation. Immersion of the part in cold, or tepid water,

according to the season, and present convenience ; or the application of sponges, or linen dipped in water : in fact, this fluid, used in every fashion, prevented or moderated when they occurred, sinister symptoms ; restrained, within proper limits, irritation and inflammation, and promoted as good a suppuration as the nature of the parts would allow. By such means he obtained cures with water only. Since it was the only application to which he had recourse, he thinks that we obtain, by the use of water, all the best effects, without the use of poultices, and save large sums to the public treasury.

#### THE MODE OF APPLYING WATER TO A WOUND.

Apply on, or around the limb, as the case may be, pieces of sponge, moistened from time to time, with water. Since it is sufficient to pour the water on the sponge without removing it, thereby preventing both disturbance and pain, a sponge is preferable to linen, because the water does not evaporate so rapidly from it. If sponge cannot be obtained, cotton, flannel, or swan's down, should be selected in place of linen. If the parts are sensitive, we may apply soft linen immediately next the wound, and let it remain there, and apply the other above it. In tropical climates, a favorable remedy is plantain leaves applied next to the wound, and frequently wet with cold water. *Percy* is of the opinion, that lockjaw would be a much less frequent occurrence from wounds, if water dressing were used, and to keep the cloths all the time moist. Where the edges of wounds become spongy, it may be well to add to the water a little salt, or alcohol. This remark will better apply to contused than simple smooth wounds. In gun-shot wounds, the addition of salt, or alcohol, is well adapted. *Percy* cites the success attending the employment of water, with the chill barely taken off, in several cases of gun-shot wounds in the feet ; in which there was a terrible laceration of the tendons and ligaments, and fracture of the bone. Were it possible, says the French surgeon, for a person wounded by a bullet, or by any other violent means, in the elbow, knee, or foot, to keep the part immersed in water, during the first ten or fifteen days, we should have much fewer amputations to perform, and a greater saving of lives. *Sanson* thinks that the water dressings are best adapted to lacerated wounds, in relieving the tendons and aponeurosis. *M. Josse*, of Amiens, says the forms of inflammation, in which water is best adapted, and may be employed with success,

are, in addition to contused wounds, erysipelas, phlegmon, burns, and *mortification*. He recommends cold water to be applied directly after the injury, before inflammation takes place; and where it can be applied with energy, proportional to the occasion, the phenomena of reaction will (he assures us,) be prevented, the heat, pain, and swelling will be subdued, and, consequently, the sympathetic fever will not take place. He goes still farther, and asserts, that even after the inflammatory symptoms have been developed, they may be conquered, by its efficient use, and that re-organization takes place more favorably under its application. (*See British and Foreign Medical Review.*) A more modified view is probably the correct one; that is, that cold water is beneficial in the forming, and, probably, in the first stage of inflammation; but that, after this, tepid, or warm applications, as recommended by *Dr. Macartney*, of Dublin, are preferable. To *Dr. Macartney*, more than to any other, is *British surgery* indebted for the free and methodical use of the water dressing in wounds. In his work on inflammation, he points out the important fact, of the reparation of parts, after wounds, being brought about by processes more approaching to physiological growth, than to the pathological state of inflammation; which last, so far from being necessary to such reparation, retards, and may prevent it entirely. *Dr. Macartney* says of water dressing, "It assists the reparative process by producing a moderate degree of cold in the affected parts, which diminishes, but does not extinguish sensibility and vascular action: it, in fact, allows the reparative process to be carried out, as we see in the inferior tribes of animals." The cold is a direct sedative to all vital action; it should, therefore, be in such moderate degree, as to prevent inflammation, without suspending the process of reparation. For this purpose, the mode by irrigation is preferable. In case of severe injury alone, where the inflammation cannot be otherwise restrained, intense cold is admissible. A very simple rule may be adopted in this respect, as to the temperature of the water, which is, to consult the feelings of the patient; when they alleviate pain they do good; but when they fail to have this effect, they are improper. The most easy and manageable way of employing irrigation, is to place the wounded limb in a trough, and having laid some lint on the inflamed part, to let the water be conducted by means of a strip of woollen cloth, from a vessel holding the water, or other fluid, which may be placed on a chair, or table, standing beside the bed: one end of the strip is to be inserted into the vessel; the other, which should be

cut into a pointed shape, laid on the lint: the water will then proceed in the manner of a siphon, continually from the vessel, not by drops falling from a height, the sensation of which is disagreeable; and is carried off by a tube proceeding from the end of the trough into a vessel placed at the head or foot of the bed, as the case may be. *Dr. Macartney* says, "I have found that a strip of cloth, of some breadth, where it is inserted into the water, and ending in a point, where it touches the lint, answers the purpose of a siphon much better than the filaments of candle-wick, which some surgeons have employed." The patient is able to vary his position with this apparatus. It is obvious, that irrigation can only be used with convenience to the extremities. The water may have any degree of temperature that is desired. The prime conditions for aiding the reparative process of nature, by preventing, or subduing inflammation, so liable to occur in wounds, consist, principally, in the careful regulation of temperature, and the constant application of moisture. It is advisable, if the water-cure be adopted, that the parts should be kept all the time moist; and, if the mode of irrigation be not used, some one, as a careful nurse, should sit by the bed side, and, by squeezing a moist sponge over the clothes, let the water drop on them gently, but constantly. If a change be thought necessary in the temperature of the water, or for other dressings, it should be made gradually, so that too great a shock be not given to the circulation.

*Dr. Tiller*, of Lancaster, Pennsylvania, has written an interesting paper on this subject. It is chiefly illustrations of the beneficial effects of cold water in violent inflammations of the extremities, following fractures, wounds, and other injuries. He directs that, in the more violent grades of inflammation, that the coldest spring water should be procured; or, if necessary, it may be artificially cooled, and the limb be kept constantly bathed in it, until the morbid excitement be reduced. *Dr. Tiller* thinks, that copious effusions of cold water would be preferable to the common practice, in lacerated wounds. *Dr. Bell* says, he has frequently used cold water dressings with marked benefit to old ulcers. It is a sound axiom in surgery, that all wounds, without the loss of substance, will heal of themselves, if inflammation be prevented, and the lips of the wound be kept together. With regard to the healing of ulcers, we all know, that by standing a long time in the water, ulcers of the legs readily heal, especially, if the feet and legs be bare. Hence, fishermen rarely have sore legs, though



they have them frequently wounded, and that, too, by poisonous substances.

We leave the subject of the surgical use of water, and return to its use in the cure of diseases. Hitherto, we have said but little about water as a remedy taken internally in the form of a diluent. By a judicious continuance in the use of cold water, as a drink, we have it in our power to relieve the stomach and bowels of their crude contents, to dilute the excess of fibrin, and sometimes of saline matters in the blood, to wash away morbid formations, lithic acid and its combinations, and to replenish the blood vessels where they have been suddenly deprived of a large part of their serous, or watery contents. After pursuing the directions of the free use of water, as a drink, and a remedy in so many diseases, by successive writers, from *Galen*, down to *Theden*, and *Hufeland*, we must have anticipated the views and suggestions contained in the paper written by *Dr. Holland*, on the use of diluents. It is pleasant, however, to obtain confirmation of a truth, yet doubted by many, from a gentleman, who, like *Dr. Holland*, unites habits of study and reading, with the opportunities furnished by a large practice. He has often known the action of the bowels to be maintained with regularity, for a long period, simply by a tumbler of water, warm or cold, on an empty stomach, in cases where medicine had almost lost its effect, or become a source only of distressing irritation. The advantages of this practice are still more obvious, where the intestinal secretions, or the products of digestion are vitiated in kind. Singular relief is often procured from this morbid sensation, by the dyspeptic patient taking, before breakfast, a pint or more of water, warm or cold. Properly regarding the alimentary canal, as—a surface, with similar functions to the skin, it is capable of being acted on in a similar manner. The abstraction of heat from an inflamed, or irritable membrane within, is often, indeed, quite as salutary as the cold directly applied to the hot skin. The extent of use is, from obvious causes, much more limited : but I have seen enough of the benefits of cold liquids freely given, in the acute stages of gastric disorders, inflammatory, and febrile, with express reference to this temperature, to qualify the recommendation of the more frequent use of it in practice. This is a point where the feelings and desires of the patient may be taken as a guide, and we can rarely go wrong in following them. The test depends on sensations which cannot readily be mistaken, and the changes which indicate the extent, as well as suggest the



use of the remedy. The second condition is one of more difficulty, and connected with questions in physiology and pathology, which we do not intend to discuss here. It is conceded, that the blood can appropriate, by absorption, medicines largely diluted. Under these circumstances, liquids may be freely and largely given, in those cases where there is a demand for them. The effect of diluents upon the various functions of secretion and excretion, have been fully advocated by many valuable writers on this subject. It must be acceded, that the use of water scarcely receives enough attention by the English and American practitioners. This is a point wholly distinct from the question regarding the fit proportion of liquids as a part of diet. The process of digestion often suffers from any excess in quantity of these; and though the natural appetite may be unduly controlled; yet, some rule is often required, in dyspeptic cases especially, to obviate such excess, even where the most simple and innoxious liquids are concerned; for in these cases a morbid craving is often created, partly by the vitiated sensations of the patient, and partly by the actual state of the membranc lining the palate, œsophagus, and stomach, and from the disordered secretions and products of digestion acting on this surface.

This subject is so copious, that we scarcely know when to stop. But we are compelled to bring this chapter to a close. We shall now describe the different processes through which the patient is to pass, in the course of the hydropathic treatment, for the cure of disease; and we cannot do better than quote from the celebrated *Priessnitz*, of Graefenberg, as he is, at the present day, the only man who seems to have reduced the practice to any thing like a system. He has, however, many followers, and many who know nothing on the subject as a science, not allowing, by any means, that *Priessnitz* knows any thing about the practice scientifically. We conceive we have given what is properly the first stage of the hygienic treatment of disease, as well as the general plan of cure by water. We now give the second stage, or different modes of local application of water, as used by *Priessnitz*.

#### THE SEVERAL STAGES OF HYDROPATHIC TREATMENT.

There are four in number, and they are gone through in the following order:

1st. *Sweating*.—The patient is awake at dawn of day, and, after being divested of his night clothes, is carefully enveloped in a

blanket, or woollen wrapper, leaving his face and head alone uncovered; the head is afterwards covered with a napkin, and he lies down on a mattress, when more clothes are put over him, and sometimes a feather bed, in German fashion; the air of the room being of a reduced temperature. Thus situated, the patient soon manifests increase of animal heat, redness of the face, &c., followed by sweat. On the appearance of this secretion, the windows of the room are opened to purify the air; an attendant holds cold water to the patient to drink, and does the same at intervals afterwards. At first the third of a glass, and afterwards a full glass is taken every quarter of an hour. The sweat is greatly increased by this means, and becomes so copious as not only to bathe the entire surface, but also to pass through the bed clothes, and flow in small streams on the floor. It is allowed to continue from one to six hours, according to the nature of the case, and the strength or vital force of the patient.

*Wet sheet packing.*—If there be difficulty in procuring perspiration by the dry envelops, the patient is wrapped carefully in a wet sheet, which has just before been dipped in cold water, and then wrung out with some force: over this comes the woollen covering, and then the feather bed. Few skins, however dry and harsh they may be, resist the sweating operation of the wet sheet and its assistant coverings.

2nd. *The cold bath.*—After the sweating period has been gone through, the feet are freed from the bed clothes and wrappings, and stockings and shoes, or boots, are put on by an attendant: the coverings are somewhat loosened, but are still kept round the body, like a cloak. Thus equipped, the patient walks down to the bath, which is supplied by a cold spring, and immerses himself in it. The bath is from twenty to thirty feet in circumference, large enough to admit the patient to move his limbs about freely, and turning himself with ease in the water, which is of a temperature from  $45^{\circ}$  to  $52^{\circ}$  of Fahrenheit. The mode of entering the bath is by prompt immersion, first wetting the head and chest with the water. The bather then either swims or makes equivalent movements, so as to give himself as much exercise as possible: he also washes thoroughly by rubbing his body and limbs. At the expiration of ten minutes he leaves the bath, and is invested, by an attendant, with a sheet and coverlid, and conducted to his chamber, where, on being dried, he dresses himself quickly, and then sallies out. The object now is to take exercise in the open air, to produce reaction,

and also to drink the water. In an hour afterwards the patient returns to the house and takes his breakfast.

*The half, or shallow bath.*—Feeble, delicate, and irritable persons, are not subjected, at once, to the cold bath; they take what is called the half bath, that is, they are placed in a bathing tub, the water in which is only six inches deep, and of a temperature raised by the addition of warm water to  $56^{\circ}$  or  $60^{\circ}$  Farenheit, and sometimes to  $63^{\circ}$ . The patient, as in the former case, wets his head and chest with the water, and then enters the bath; in which he remains seated, and rubs his body well with a cloth. He continues in it five or six minutes, during which time an attendant pours over his shoulders, and sometimes his head, tepid or cold water.

*The temperate bath.*—The tepid bath, as it is called by some, by way of courtesy, (for to the feeling of most men it would, unequivocally, be called cold,) is used by *Priessnitz* preparatory to the cold bath—to which last patients are subjected at the end of a few days. Some pass at once, from the temperate to the cold bath, and return again from this to the former. Others, in whom it is deemed either useless, or impracticable, to produce sweating, take the tempered bath in rising from their bed, so as to become accustomed, gradually, to a lower temperature. *Priessnitz* has recourse to it in some subjects, who are slow to reaction, as a means of creating fever, and thus bringing about what he believes to be symptoms of crisis. In these cases the patient remains an hour or more in the bath tub, which has a lid, with an opening, to allow the head to appear above it.

*Cold ablutions.*—Those whose constitutional powers are so weak as to disable them from the use of the bath by immersion, are obliged to content themselves with ablutions of cold water. These should be regarded as an excellent preparative for the treatment, especially in the cases of young children, and persons whose skins have been weakened by the use of too warm clothing. We do not require any hydropathic illumination to make us aware of the utility of the practice of ablution. To persons in common health, with a view to the keeping up suitable activity of the cutaneous functions, it may be performed with a sponge, towel, or the hand, and its efficacy will be greatly increased by strong friction.

3rd. *Drinkiny cold water.*—The quantity of water drank during the day by those under the care of *Priessnitz*, is represented to be, on an average, from six to twelve pints, of a temperature ranging from  $46^{\circ}$  to  $53^{\circ}$  Farenheit. It is drank by the patient

when he is yet in his bed sweating; after the bath, when he is walking about, between breakfast and dinner, during his meals, and in the afternoon, two or three hours after dinner, and again in the evening. The times preferred are before breakfast, and during exercise. The appetite of the sick is the best guide, as to the quantity and frequency of their drink. Taken beyond measure, it has produced aqueous indigestion.

*Douching*.—The fourth act of the hydropathic drama—sweating, cold bathing, and drinking cold water, being the other three—is the use of the *douche*. This is applied an hour after breakfast, and three hours after dinner. The water, brought directly from the spring in troughs, falls through tubes, at heights of from ten to twenty feet, and with a diameter of between three and four inches. The place for receiving the *douche*, at Graefenberg, is in the open air, surrounded by a wooden palisade, and traversed by horizontal bars of wood, of which the weaker patients take hold, in order to prevent being thrown down by the impetus of the fall of water. The bather, having been previously undressed in an adjoining apartment, is wrapped in a sheet, and enters the enclosure, where he throws aside the sheet, and puts on slippers. Before receiving the *douche*, he wets his head and whole body with water, received into the hollow of his two hands with his fingers intertwined. For the first few seconds the *douche* is received on the nape of the neck, and along the back, and afterwards on all parts of the body; the bather, in the mean time, rubbing his skin, at all accessible points, with his hands; and, in this way, we are told, he removes the unpleasant sensation of cold produced by the *douche*. After the body has received these watery favors, the water, during the remainder of the *douching* period, is to be directed, especially, on the diseased organ, or affected part. The duration of the *douche* will vary from five to fifteen minutes; the last period is not to be exceeded. After it is completed, the body is to be thoroughly rubbed; the person dresses quickly, and returns to the house; but the aqueous labours of the day are not yet over, for, if time is allowed, the remaining hours before dinner are to be devoted to the local application of the water, in some of the fusions described below. No inclemency of weather is to prevent the use of the *douche*: some have taken it when the thermometer in the open air was as low as 12° below the freezing point, (but, in general, trials of this kind are neither necessary nor wise.) The *douche* is forbidden in cases of great irritability, febrile excitement,



or extreme languor. Its effects in gout and rheumatism are prompt and pleasing.

*The seat, or sit bath.*—No application of water figures more prominently than this in *Priessnitz's* treatment. It is so constructed as to allow the patient to sit in it, nearly up to the naval; it rises at one end so as to support the head, and back, while the lower extremities are outside, and in a state of demi-flexion. The part of the body not immersed, is to be well covered. The duration of the seat bath varies according to the indication to be fulfilled. If it is intended to strengthen, or even stimulate the organs in the region exposed to the water, as in weakness of the organs of generation, nocturnal pollutions, impotency, flour albus, &c., the patient need not remain longer than from ten to fifteen minutes in the water: but if it is desired to produce a revulsive effect, as in cases of inflammation of the head and chest, in fevers, or to cause powerful impressions in chronic affections of the abdomen, as for instance in congestion of the liver and spleen, chronic diarrhoea, or obstinate piles, the patient may remain in the bath for a full hour. Chronic determination to the head sometimes requires two hours duration. Inflammation of the brain and organs of the chest, and in nervous fevers, a few mouthfuls of water are swallowed from time to time. The time for using the seat bath, at Graefenberg, is two hours before dinner; but, sometimes, it replaces the *douche*; then it is taken after dinner. In certain cases, again, where there is great irritation, its use follows immediately after the sweating stage: it is then preceded by general ablution. During the whole period of the bath, the skin of that part of the body, and particularly to the lower part of the abdomen, immersed in water, is subjected to continued and active friction. The water is to be renewed as soon as it has acquired the temperature of the body. On quitting the bath, the hips, thighs, and lower part of the sacrum, which are almost benumbed by cold, are to be well rubbed; and, if exercise can be taken soon afterwards, the natural heat is not long in being restored.

*The cold foot bath.*—It is used as a revulsive in pains of the upper part of the body. This is to be a very shallow bath, not more than an inch deep, except when used as a tonic, then it is to cover the ancle. This is continued from ten minutes to an hour.

*The cold head bath.*—This mode of bathing is used for headaches, sore eyes, &c. It is practiced by the patient reclining on a table, at one end of which is a vase of water, of a suitable size and



depth to allow of his immersing first one side, then the other, and finally the back part of his head, giving about five minutes to each of these regions.

*Embrocation, or fomentation.*—This is done by the wet sheet, or napkin, which is applied to any given part, and covered by dry cloths, so as to cause that part to sweat freely.

*Reducing process.*—This is done in fevers, where the sheet is frequently reapplied, that is, every fifteen or thirty minutes. Local applications are also to be made to any particular suffering organ.

*Exciting process.*—When heating or stimulating effects are derived from local applications, linen, in numerous folds, resting one on the other, like a compress, is wet, and afterwards wrung out with some force, and applied closely to the prescribed part. Over this are put dry compresses, in order to prevent the access of air, and consequent evaporation. Great pains must be taken to make the wet compress fit closely to the skin, so as not to allow the introduction of the least portion of air between the skin and the wet compress. The heat which is soon generated under this compress, is much greater than the natural heat. The compress is to be renewed when it becomes dry, which is nearly every hour. The exciting effects of this remedy are manifested in what may be called a depurative sweat, which is at first clear and difficult to be procured; but as the treatment advances, it becomes more profuse, is viced and glutinous, of a dark yellow, or brown color; sour, and impregnated with the most disagreeable odors. This stage of the sweating is often followed by an eruption, which is called the critical stage. When this application is made round the body, it is called "The Belt of Neptune."

*Injection.*—Liniments and blisters are not omitted in the hydropathic treatment. They first use them of tepid water, afterwards cold water. Frequently rinsing the mouth with cold water, is more salutary than might at first appear: it acts beneficially on the mucous membrane of the mouth and throat, and stimulates the salivary glands to partial salivation. In some cases of gout of the head, it diminishes the pain. The nose is washed by snuffing up water. This process is serviceable in scrofulous affections of this part, as also in bad colds and headache. In these cases fomentations to the forehead are employed at the same time.

*Crisis.*—The process towards a cure at Graefenburg, appears, to the patient, to be interrupted all at once by the feeling of great langor

and prostration, accompanied by febrile movements, and increase of secretions, which are deemed critical. Vomiting, diarrhœa, increased flow of urine, are among these signs; but more than all, the appearance of what is hailed with joy by the patients of *Priessnitz*, are certain eruptions on the skin; sometimes papular, but more generally pustular, and amounting to furunculous abscesses. The term crisis, is applied to these out-breaks; but, under the same name, are ranked also, the reappearance of old venereal ulcers, and scrofulous and mercurial syphilitic sores, and of gonorrhœa; all appears in the progress of the hydropathic treatment. *Dr. Bigel* tells us how he was gratified by the appearance of forty-five abscesses, one of which was a whitlow, that deprived him of sleep for ten nights. The only ease he could procure from his torment, was by immersing the part in cold water. The abscess opened of itself; and the pus, on its being collected on linen and dried, exhibited a portion of calcarious matter, which we find in the articulations of gouty persons after death, or in their urine when they are living. Whatever may be the nature of these eruptions, they are all treated alike, namely, by cloths dipped in cold water, and renewed as often as they become dry. They are allowed to open without any surgical aid. The general treatment of the primary disease is still to be continued, but in a somewhat milder manner. Thus, for example, the general bath and *douche* are to be omitted; but the packing in sheets and blankets, and the drinking of cold water are to be continued. If, from the severity of the symptoms, fear should be felt that an important organ may become the seat of *crisis*, revulsive applications must be put in requisition. The papular eruption is represented to be the most common form of *crisis* in nervous fevers, and the furunculi and abscesses in those affecting nutrition. The abdomen is said, also, to be the most frequent seat of critical eruptions in old mercurio-syphilitic diseases; and the limbs in gout and rheumatism. Great is the variety of disorders brought up from their long-concealed depths by the water treatment. "Gonorrhœa, which had been suppressed two years before, cicatrices, and dried up ulcers, re-opened." Visceral diseases, we learn, are also susceptible of being renewed in this way.

*Priessnitz* relates the case of a lady, who had been salivated for inflammation of the liver, and in whom, after she had begun the water cure, there supervened hepatitis and ptyalism as before. (We are not told how long a time elapsed, between the first and second attacks in the case of this lady.) With the re-appearance

of the *crisis*, there is generally an amendment of the health, and gradual restoration of strength, and vivacity of thought and movement. *Dr. Johnson* avers, "That he has neither seen, or heard of a single case, in which these eruptions did not entirely vanish away, leaving the skin perfectly healthy and clear as before."

We have, perhaps, said enough upon the use of cold and warm water, as a remedy. We will now say something relative to the diet used at Graefenberg. The food there is served in the German fashion, of an abundance of greasy cookery. "The patients are allowed, and even encouraged to eat abundantly of roast meats, fish, green vegetables, cheese, and other preparations of milk, and fruits. The want of variety, and bad cookery, arose in part from the parsimony of the superintendent, (*Priessnitz*,) says *Dr. Johnson*, and in part from the circumstances connected with the place itself. All the food used at Graefenberg is taken cold. The most recent writers on hydropathy are silent on this subject; at any rate, the restriction is not enforced in any of the hydropathic establishments in France. *Priessnitz* prohibits all stimulous pepper, mustard, and all other condiments, except salt. He is equally strict in withholding all kinds of acids, tea, and coffee. But then, as Augustus told the Romans, when they complained of his taxing their wine, he offers them an abundance of pure water. *M. Fleury*, with a great deal of good sense, protests against so irrational a generalization as *Priessnitz* sets up. *Fleury* admits, "that the watery regimen may be advantageously prescribed to plethoric persons; to those invalids who have committed excesses at table, or who are afflicted with chronic gastritis, (inflammation of the bowels or stomach,) or an affection of the liver, gout, or gravel; but he alleges it is often hurtful to chlorotic, frenic, scrofulous, and nervous subjects." I have no hesitation in saying, that if the diet of the patient be properly regulated according to his case, that a cure would be much more readily and speedily obtained, than where no restrictions are used in this respect. One thing is very remarkable, both in relation to the subject of change of diet, and still more to that brought up by the class of half-way reformers. That the sudden and entire abstinence from all alcoholic liquors, by those inmates of Graefenberg, who had been the most free in drinking them, was not productive of the least inconvenience to the parties. This being the fact, away with the practice and advice often given to drinkers, to taper off. Quit it at once, and take to the free use of cold water.

This subject, namely, the hydropathic practice, is full of interest, and requires a few words of explanation and caution, before it is submitted to the public, as a curative process, or prophylactic remedy. The only difference between the ordinary practitioner, and the hydropathist is, that the latter thinks he has discovered a new remedy, and obviously, it is as necessary to know how, when, and in what dose, to apply this new remedy, as the old one. And the same kind and amount of knowledge is necessary: for an over dose, or misapplication of the new remedy, is as deadly, as an over dose, or misapplication of the old remedy. And this must be distinctly, and permanently remembered. First, that the well-informed hydropathist does not pretend that his remedy is applicable to all diseases, nor to all states of the same disease. Therefore, a thorough knowledge of the nature of the several diseases, to which the human body is liable, is necessary, that he may distinguish one from the other, to know when the same disease is produced by this cause, or by that; which is the same thing as to know, when the same disease is *curable*, and when it is *not curable*. To know in what particular *stage* the disease is, when the patient applies for advice; to know whether the symptoms of which he complains are produced by *disorganization* of parts, or whether they are merely *functional*, and only depending on morbid sensibilities of *nervous centers*. All this, and much more, is clearly a necessary part of the hydropathist's education. For, if he does not possess this knowledge, he will not only do much mischief, but will be continually receiving patients, and vainly submitting them to a long, tedious, and expensive process, when he ought to have known at first, that the case was one which could not be benefitted by the hydropathic treatment. I will cite a few instances. In the cure of dropsy, if the disorder has arisen in consequence of general debility, arising simply from functional derangement, the case is one that may be cured by the water treatment. But if it has arisen in consequence of chronic adhesions, as between the *pericardium* and *pleura*, or in consequence of tubercles in the liver, or from the pressure of any internal tumor resting upon any of the large veins, so as to prevent the return of blood to the heart; to submit such a case to the water cure would be a culpable injustice, and, to say the least of it, a most gross cruelty. So again, in epilepsy, and palsy. If these affections have arisen in consequence of some irremovable mechanical agent, as the growth of a *spicula* of bone, goading the brain, or spinal marrow, or some



large nerve ; nothing can cure them, but the removing of the exciting cause. But, if they have been produced by a clot of blood, which has oozed from some small ruptured vessel, then, I say, such cases are curable by the water treatment, united to a *severe course* of abridged diet. Again, it must be *distinctly and permanently remembered*, that the hydropathic remedy, so seemingly simple, is not *unique and one*, but *several*, and thus effects, *diametrically opposite* to each other, may and are produced by it. I would again repeat, that a knowledge of sound physiology and pathology, are never more required than in the practice of the water cure ; and in no system of treatment will the great truths of these sciences find more ample and beautiful confirmation. *Priessnitz* was lamentably deficient in physiological and pathiological knowledge ; but he made up for his deficiency before the uninformed, by his bold and dogmatical assertions. On the death of a lady patient, at Graefenberg, supposed to be from an internal abscess, the body was examined, but no abscess was found. What, then, was the explanation offered by the man whom his admirers profess to venerate as a second *Hippocrates*? Neither more nor less than this, “that the deceased had too short a neck for a long life.” Where could another man be found, who would dare to express himself in this style? Where could we find a people, but those enveloped in gross ignorance, and beclouded by superstition, that would esteem such an answer the evidence of profound wisdom.

We would give some rules for sea bathing, but we presume this work will not be consulted on that subject ; and those who resort to the sea shore for the purpose of using the sea bath, will find, at those places, prepared for the accommodation of such patients, all the necessary directions for its use. Also a full description of the character and nature of those diseases which are likely to be benefitted by sea bathing, as well as the manner and time, or times of taking the bath. It is abundantly evident, that every form of disease should not be submitted to sea bathing, any more than to cold fresh water bathing ; and the same knowledge is requisite to conduct the one as the other. Let no man suffer himself to be treated by any one who is not qualified to conduct such an establishment.



## THE USE OF CHLOROFORM IN MIDWIFERY, AND AS A SEDATIVE OF UTERINE PAIN GENERALLY, WITH THE MODE OF APPLY- ING IT: ALSO, THE MODE OF APPLYING IT IN SURGICAL CASES.

CHLOROFORM has now had time to be amply tested in obstetric practice. The opinions of eminent men, however, still clash respecting its utility and safety. *Doctor Bennet* has used it very extensively in labor, as well as in uterine pain generally. He thinks the amount of danger incurred is so small, as not to forbid its use when the case demands it, or the patient shrinks from pain. The greatest care, however, ought to be observed; and I cannot too decidedly urge the precaution of seeing that the chloroform vapor is mixed with a sufficient quantity of atmospheric air, for the purpose of respiration; so that, on the one hand, asphyxia may not be produced; and, on the other, that the sedative effect of the chloroform on the nervous system may take place gradually, so that the latter may not instantaneously be paralyzed by the sudden presence of a large quantity of chloroform in the system. It is, for this reason, I generally prefer for inhaling, a thin cambric handkerchief, to any of the inhalers now in use. The handkerchief certainly does admit of a more easy and gradually chloroformization. Extreme caution in the first stage of inhalation is necessary; as most of the cases of death from its use, that have been recorded, have taken place after a few inhalations only, and from a quantity of chloroform which appears incredibly small, (half a drachm, or a drachm.) Those who are in the habit of using it continually, find it necessary to give four or five times that amount, in order to produce complete *anesthesia*, or insensibility. But we shall explain this at the close of the chapter, when we speak of those persons in whom there is an inadmissibility to chloroform.

There are four classes of cases in which chloroform may be safely administered; and, when judiciously applied, suspends suffering, and is heaven's blessing to the afflicted. It may be administered, First, in irregular, but unnatural labor: Second, in operative labor: Third, to facilitate operations in the uterus: Fourth, to subdue uterine pain, in difficult and painful menstruation. In natural labor, the use of chloroform may be dispensed with, till

the last stage is ushered in; then it may be given to allay the severity of those pains, and promote relaxation of the parts: or it may be given when there are some morbid conditions of the nervous system, which may be interfering with the progress of labor. We must not omit to say, that the pains of labor are sometimes partially arrested, or interfered with; or, are rendered irregular, or insufficient by fear, impatience, want of self-control, or by long continued suffering. When this is the case, chloroform generally exercises an almost magical effect; under its influence, all nervous excitement is soothed, the pain gradually becomes more regular and efficient, and the labor once more progresses regularly. This return of the labor pains, and their regularity under the calming influence exercised by chloroform on the brain, probably explains the increase in their intensity, noticed by some writers, on its first administration; and thus is explained the apparent discrepancy of different observers, on which so much stress has been laid by the opposers of chloroform. If the pains are arrested, or modified by nervous reaction, they return: if, on the contrary, they are too violent and prolonged, as is sometimes the case in the latter stage of labor, when the soft parts are rigid and irritable, the intensity of the pains diminish on the withdrawal of the excess of stimulation: this the chloroform does, by relieving nervous sensibility, and therefore, does great good. It gives time for the soft parts to yield, before they are endangered by the birth of the child. The disordered state of the circulation, and the congested condition of the extremities of the vessels, which are often observed in many cases of irritable labor, give way, in a most remarkable manner, to the action produced by the inhalation of chloroform. This is so much the case, that the use of the lancet may be almost entirely dispensed with in such cases, where once we thought it not safe to do so. Although I never hesitate to give chloroform in natural labor, when I think it may be of use, I do not urge my patients to take it merely as a remedy for pain. If they wish to avoid the pangs of labor, and wish to inhale chloroform, I do not object to its administration. Firmly believing that a judicious use of it can do no harm, I do not see how I could object to its use; but I never press my patients to resort to the use of chloroform, when the labor is progressing well, and they are able and willing to bear it.

In *operative midwifery*, we may, with great benefit, resort to the use of chloroform. The cases which most demand its use, are in

turning the child. Where the placenta has been retained for some hours, the use of the chloroform, to allay the irritability of the sensitive parts, is invaluable. It also relaxes the rigidly contracted uterus. As I am one of those accoucheurs who very seldom find the application of the forceps necessary, or even warranted, I have scarcely had an opportunity of judging, as to the advisability of placing the patient under the influence of chloroform, prior to their use. I should, however, be inclined to give a negative opinion, as either the maternal parts are sufficiently roomy to admit of their application without pain, or they are not; and, in the latter case, the danger of injury to the mother would only be increased by her unconsciousness. When I administer chloroform in simple midwifery, I never give it to such an extent as to annihilate pain, but merely to allay, or deaden it: in a word, I do not attempt to render the patient totally unconscious of her sufferings, but merely to render them bearable.

In operative midwifery, the full effect of the chloroform must be obtained, as the intention is then, both to render the patient unconscious of what is done, and to obtain the muscular relaxation, which is produced by a full dose of the chloroform.

In uterine examinations and operations, chloroform is occasionally very useful; though, as a general rule, no instrumental examination of the uterus need be painful, if an instrument proportioned to the degree of dilatibility of the vaginal orifice be used, and proper gentleness be observed. There are cases, however, in which the fears of the patient are so great, that the use of chloroform may be desirable. There are also cases in which the uterus, its neck, and even the vagina, are the seat of such intense neuralgic sensibility, that interference of any kind is almost impossible; unless the patient be under the influence of chloroform. There are some cases where the patient cannot bear the slightest touch of these parts; the cervix uteri being ulcerated, no remedy could be used without the use of chloroform; consequently, the patient would die, (and many have died, before this remedy was discovered,) without its use. No detrimental effects have resulted from a repetition of the remedy in those cases, so far as I am made acquainted. It occasionally gives rise to a little sickness at the stomach, and that is all. The quantity required varies very much at different times, even in the same patient, to produce the same effect. It generally requires from half a drachm to a drachm, at each inhalation. The sickness that follows the use of chloroform does not depend on the

quantity taken, but upon a certain condition of the nervous system, which, perhaps, could not be ascertained before its administration.

In uterine pain, or painful menstruation, or from cauterisation of the mouth, or neck of the womb, or from any other cause, chloroform is a valuable medicinal agent, either when given internally, or by inhalation: the latter is preferable. But when it is given internally, from three to four drops should be mixed with mucilage, in the yolk of an egg, to hold it in solution, before the water is added. If a little camphor be added to the chloroform, which soon dissolves it, the solution will more readily mingle with water. The dose may be repeated every fifteen minutes. *Mr. Nunneley's* experiment points out its local action. When applied to the skin, or any of the tissues, its immediate effect is, "to induce redness, some tumefaction and paralysis, with loss of feeling of the part which has been exposed to its influence." Bearing in mind these three facts, its action may be understood. The vapors of chloroform, diluted with atmospheric air, according to the strength of the dose, when drawn into the lungs, is rapidly diffused over an immense extent of mucous surface, surrounded on all sides by innumerable blood vessels, and nervous fibrilla. It first acts as a stimulant, exciting cough, hurried breathing, a sense of choaking, excitement of the brain, and, if pushed too far, produces convulsions; but this effect is almost instantly followed by the sedative influence of the vapor. When chloroform is perfectly pure, the stage of stimulation is scarcely noticed, being so rapidly succeeded by insensibility; but, if it is impure, it is exactly the reverse, which proves the importance of attending to the quality of the article used, if we would wish to measure accurately its effects. In the lungs, it is brought into immediate contact with the ultimate ramifications of the nerves and blood vessels that surround the vesicles, and passing through these it is taken into the pulmonary circulation. *Mr. Nunneley* is inclined to think, "the action is primarily, in all cases, and principally, if not entirely upon the nerves." If this be the fact, the sedative effect is instantly communicated to the cerebro-spinal axis, and from thence reflected over the whole of the sentient nerves. Such, however, is not the effect when locally applied elsewhere: the loss of sensation seems quite confined to the part, or to progress but slowly over the body. The extent of nervous surface exposed in the lungs, as compared with other parts, may, however, account for this influence. *Doctor Snow* has shown, by experiments very carefully conducted, that the vapor of chloroform



is absorbed into the blood, and the quantity absorbed bears a fixed proportion to that inhaled. Chloroform is very volatile, and therefore rapidly diffused through the system; it is only slightly soluble in the serum of the blood, and, consequently, the blood parts with much less than it absorbs. This will explain the rapidity of its action; because a certain portion being free, is immediately conveyed from the lungs to the heart, and from thence throughout the whole circulation. It will also account for the slight change produced in the blood, in proportion to the effects produced on the nervous system. If we assume, that a free undissolved portion of chloroform passes rapidly from the lungs to the heart, and thence throughout all the vessels of the body, its effects on the constitution may be understood. First, on its arrival at the heart, a safe dose will only act as a stimulant, or perhaps not at all. In some cases, where the patient is previously excited by apprehension, and the heart, in consequence, pulsates rapidly, chloroform may reduce these pulsations, by controlling the mental excitement; but this is very different from the slower and feebler beat, which is the result of its sedative effects. This symptom is important to attend to, because sudden death is the consequence, if the heart's action be suspended. The syncope of chloroform is fatal; and, if too concentrated a dose be inhaled, the excess of free chloroform may be so great, as at once to paralyse it. The brain gives evidence of its effects, by loss of consciousness; the medulla oblongata, in a slow deep stertorous respiration, and in the dying activity of reflex action. The different degrees of its influence, on the vital functions, have been fully pointed out by *Dr. Snow*; but that effect which has the most important relation to our present subject, is the independence of sensation and consciousness. *Mr. Nunneley* observes, as the result of several experiments, that "the animal, after recovering from the effects of soporific, is often conscious long before there is any muscular power, or even mere sensation; indeed, after a moderate dose, or when the dose is not sufficient to induce a complete state of insensibility, consciousness remains where there is no power of motion, and but little sensation, as every body who has inhaled any of those substances knows."

This effect has been frequently noticed by *Dr. Bennet*, and also by the writer, and seems to him to be one of its most valuable actions in obstetric practice. A moderate dose will diminish, if not remove sensation, without destroying consciousness. The patient is afforded relief from the intensity of her sufferings, without being



put to sleep; and also by a suitable dose of chloroform, without producing the slightest risk. The reverse of this sometimes happens under the use of more full doses; consciousness is lost, but sensation remains; a metaphysical difficulty, certainly, but which, nevertheless, seems to be true. The patient may place her hand to the back, or some other part, and she will give evidence of sensibility. Yet, after the child is born, she will declare she felt no pain.

In a recent conversation with a surgeon dentist, on the use of chloroform, he informed me that he had witnessed, but a few days previous, a patient to whom he had administered the chloroform, while a surgeon applied the actual cautery, so severely, that he burnt a hole an inch in diameter, and one inch deep in the thigh, during which time the patient complained severely; but when the operation was over, and the patient restored to his rational feelings and senses, he declared that he did not know when the cautery was applied, nor did he feel any pain. This is still another confirmation of the above facts, that although the patient may complain, during the pain, of its acuteness, when fully under the influence of chloroform, yet, when restored, has no recollection, of having suffered pain. When chloroform is administered injudiciously, and death is produced thereby, we do not see that this takes place in a uniform manner. But the influence of the chloroform on the vital functions may be progressive, or simultaneous. Loss of sensation, motion, and consciousness, may be followed by stertorous, labored, feeble respiration, and this by the gradual cessation of the heart's action; or they may occur all at the same moment, the pulse, respiration, and consciousness ceasing together. Hence, the appearances after death, in man and beast vary, and are influenced very much by the rapidity of the effect. After the most powerful doses, the lungs are collapsed, the heart florid and empty, or the right side moderately distended from the *vena cava*, and the left ventricle contracted by the vigor mortis; the brain is natural. But when death is less instantaneous, the lungs are congested, ecchymosis, emphysematous; the right side of the heart, and cava distended, sometimes enormously, and the sinuses and membranes of the brain filled with blood.

*Dr. Murphy* recommends, "that, in ordinary cases of labor, the dose of chloroform should be very small; and herein consists the safety of the practice." In natural labor, the full influence of chloroform may certainly be safely induced, but it does not

appear to the writer necessary to go so far. It seems, to him, to be sufficient to diminish the intensity of the pain. This may be accomplished without putting the patient to sleep; without even disturbing, in the least degree, her self-possession; perfect consciousness may remain, and yet the urgency of suffering completely subdued.

When chloroform is given for this purpose, the quantity is so small, that no interruption to the action of the uterus could be produced. Whenever this has happened, the dose has been sufficient to put the patient to sleep; but even here, the effect was only temporary, and passed away with the chloroform, when the uterine contractions returned with more power and efficacy than before it was inhaled. In order to subdue the pains of natural labor, I generally pour half a drachm of chloroform on a clean cambric handkerchief, and this is held to the mouth of the patient, by an assistant, so that she can breathe it without touching the handkerchief with her lips, and yet so as to inhale it through the mouth. Three deep inspirations are all that I allow a patient to take at once. This may be repeated when the pain is felt to be approaching; but it should never be used, except in the last stages of labor. By applying the chloroform in this way, the quantity really admitted into the lungs is very small, and that well diluted with atmospheric air, so that no harm can result from its use. If this quantity, however, produce no effect, it should be gradually increased, till it becomes sufficiently pungent to render the inhalation rather difficult. Its strength should always be tested before giving it to the patient: a single inspiration will be sufficient to prove this. If the very moderate dose first used should act with a power disproportioned to the dose; if it excite the patient, produce incoherency, or interfere with the action of the uterus, it should be at once withdrawn, and not reapplied. The proper time to be selected for its use is in the second stage of labor, (as above stated,) when the pains are increasing to their highest degree of intensity.

The importance of using pure chloroform is alluded to by every writer, who has paid any attention to the subject. Pure chloroform should contain no oxygen, and the more it approaches to ethereal ether, and to the properties of alcohol, the more exciting it becomes. Hence, it is probable, that in those cases where most excitement was manifested, the effect might be attributed to the impurity of the chloroform employed. On the other hand, it should be remembered, that perfectly pure chloroform is most prompt in

producing its sedative effect; and, therefore, it should not be recklessly administered. When the quantity of chloroform sufficient for the purpose is inhaled, it may be known by the pulse, the respiration, the voluntary muscles, and the eyes. The pulse—that may have been increased—becomes slower and fuller; the respiration also is slower and deeper, as in sleep; the voluntary muscles have lost their power; the arm drops; the eyes are inclined upwards; the pupil is sometimes dilated, but always contracts sluggishly. If the quantity is more than enough, the pulse may not only be slower, but feebler; a symptom that never should be passed over. The respiration becomes stertorous.

In surgical operations, this degree of narcotism is generally required, but it is not so in obstetric practice. Spasmodic contractions of the voluntary muscles may occur. As soon as the respiration becomes slow, deep, and regular, chloroform may be withdrawn, because its action will increase for sometime afterwards. If it should not do so, it can easily be renewed. By allowing the chloroform sufficient time to develop itself, and by ordinary attention to its effects, the practitioner can scarcely err in its administration.

*Dr. Murphy* says, “He feels perfectly assured, that chloroform neither impairs the contracting powers of the uterus, nor injures in any way either the mother, or the child; and that if ordinary caution be used, and if the administrator be conversant with the properties and effects of the agent he uses, there is no risk whatever in the administration of chloroform. But, at the same time, it must be understood, that these conditions are absolutely essential. The closest attention should be paid to the manner in which chloroform is developing itself; and equal care should be given to the quality of the article used.” (See *Monthly Journal* for 1849.)

It is acknowledged, by the best writers on the use of chloroform in midwifery, that it weakens the action of the spinal nerves; hence, a very valuable hint may be taken in the management of hemorrhage, after or before delivery, where chloroform is, or has been used; that is, that neither ergot, nor cold applications will be effectual in arresting the hemorrhage; but galvanism, or direct stimulants, such as firm pressure over the uterus, and stimulants given internally—brandy, &c. It may be proper to give some exact rule, by which we should be governed in the administration of chloroform, to the extent in which surgical operations are to be performed. In all these cases, it is necessary to produce a certain amount of insensibility; and, on the other hand, it is dangerous to

push this insensibility too far. By what sign, then, are we to know that the insensibility has been carried to the proper extent? *Mr. Dudart* "thinks we may find this sign in the species of *trismus*, or stiffness that affects the muscles of the lower jaw. When the jaws and teeth are pretty firmly pressed against each other, and some force is required to separate them, we should suspend the inhalation, and may perform the most painful operation in full security, for the patient has ceased to feel." (*Med. Times*, 1850.)

We must not omit to state, that *Dr. J. B. Brown* is a strong advocate for the use of chloroform in abortion. In those cases where the placenta is held by the spasmodic action of the osuteri, he says, "That the chloroform readily relaxes the osuteri, and admits the placenta to pass, or to be easily removed by the finger." (*See the report of the Westminster Society.*) After all that has been said of the great utility of chloroform—and I would be distinctly understood to say, I think it heaven's best blessing to the parturient woman—we have to acknowledge, that, by the injudicious use of it, and before the proper mode of using it was fully known, that insanity, and also death has been produced by it. But since its use has been better understood, and the cases in which it is inadmissible are known, we feel that, in the hands of a cautious and judicious administrator, it is a safe article. I will now give those cases in which it should not be used. Any patient that has been afflicted with insanity, or is of that diathesis; persons laboring under disease of the heart, brain, or lungs, or any of the important organs of life, should not take chloroform. An anemic state of the blood is unfavorable for its use, yet not always dangerous. Lock-jaw, or *tetanus*, has been cured by the use of chloroform; but the cases are very rare, and it should not be relied on as a remedy. Calomel and opium, and clysters of tobacco juice, will do much more in these cases. But we have treated this subject in another part of this work. We might say a great deal more on the use of chloroform, in painful menstruation, hickup, lockjaw, spasms, histerea, delirium tremens, toothache, &c., but it would transcend the limits of this chapter, and come within the province of a treatise on chloroform. We think, however, that we have said as much as the unprofessional reader can render useful; and we again repeat, that it should be used cautiously by those who do not well understand its power and effects upon the system.



## ON THE USE OF COD-LIVER OIL.

THE medical world has been called to give their attention to the use and effect of cod-liver oil, in the last six or eight years, more abundantly than before. Various have been the treatises published on this subject; and, in looking over them, and weighing the opinions and statements which have been expressed in them, it is, indeed, abundantly evident, that cod-liver oil is an agent of no inconsiderable power. It is also evident, that its action is chiefly in one direction, and is exerted almost entirely in modifying, restoring, and improving the several processes, partly of primary, but chiefly of secondary assimilation, the derangement of which constitutes the basis and origin of certain symptoms which we are accustomed to treat under various names as special diseases. There are many diseases, however, of the above character, in which the effects of the cod-liver oil has not been very accurately studied—as dyspepsia—chiefly, perhaps, from the difficulty of finding pure and uncomplicated cases of this affection. It appears, however, to be most useful in those cases where the stomach and duodenum are involved; but here only after the active symptoms have been subdued by other remedies, and where the digestive powers of the stomach and duodenum recover themselves with difficulty. In those cases where the dyspeptic symptoms are dependent on some lesion, or ulceration of the stomach, or an incipient organic disease of the walls of the stomach, the cod-liver oil appears to be unsuited; and even if retained in the stomach, to be inefficacious, if not hurtful. It is chiefly in cases where the stomach does not properly assimilate the food, that the oil seems to do the most good. Such as in chronic rheumatism, in rickets, in the various affections which are the local manifestations of the scrofulous diathesis, scrofulous affections of the bones, sore eyes, diseases of the mesenteric glands, tubercles of the peritoneum, &c., and in consumption, especially in the early stages, and in various chronic eruptions of the skin. It appears to be more beneficial in those diseases of the skin where they can be traced back to a defective nutrition, and more especially, if this is laid in a scrofulous habit. The cod-liver oil has been used in a great number of other forms of disease; but the benefit has been less marked and determinate. In true gout, also in itch, porrigo, osteo-malacia, atonia amenorrhœa, worms, and in the various sequela of measles, small-pox, and typhus fever,



the opinions of its utility are very contradictory. Cod-liver oil has been found useful in cases where tonics are indicated; as in convalescence after influenza, bronchitis, pneumonia, plury, and other cases where the disease has been partially, or entirely removed. The constitution requires to have cautiously supplied to it, from which its impaired tissue may be supplied with more force. Two diseases, upon which cod-liver oil appears to exert a considerable influence, are chronic rheumatism, and scrofulous consumption. It would seem, in some of these cases, there appears to be something almost specific; while, in most other cases, the benefit resulting from the use of the cod-liver oil appears to be owing simply to its tonic and nutritious powers. Indeed, the cod-liver oil does not appear, in many of the above diseases, to be superior to the ordinary fish oil. But of the virtues of cod-liver oil there can be no question, when we look upon it in a nutritive point of view. It is certainly capable of doing two things. In the first place it fattens, and adds to the bulk of the body; it also gives nutrition a better turn, making the fluids and solids more healthy, and enabling them to throw off a variety of cachectic derangements. These useful qualities have been partially accounted for, on the supposition, that they are due to a minute quantity of some biliary principle contained in the oil. This hypothesis has been fully proved to be false, by *Robert Duritt, Esq.*, who has tried a great variety of experiments with the common fish oil, and the oil of the seal, both of which proved to be equally nutritious, and beneficial in restoring the tone of the system, and the weight of the muscles, as well as the ruddy appearance of the cheeks, and are, therefore, equal to the cod-liver oil. But the great value of the cod-liver oil, is to be found in the treatment of consumption, in its various stages.

At the Brompton hospital for consumption, cod-liver oil has been given very extensively, and in five hundred and forty-two cases its effects have been noted; of these two hundred and ninety-three were in the first stage of the disease, and two hundred and forty-nine, in the second and third, or those stages subsequent to softening. Of those in the first stage, one hundred and ninety were males, and one hundred and three were females; seventy-two per cent. of the males, and sixty-two per cent. of the females had their symptoms materially improved; in nearly eighteen per cent. of the males, and in twenty-eight per cent. of the females, the disease was arrested, that is, all or nearly all of the symptoms of the disease had disappeared, the patients felt themselves well, and able to

pursue their ordinary occupations. In ten per cent. of the males, and in nearly ten per cent. of the females, the disease progressed unchecked. Of the two hundred and forty-nine patients in the second stage of the disease, one hundred and thirty-nine were males, and one hundred and ten females; in fifty-three per cent. of the males, and nearly sixty-one per cent. of the females, the symptoms were materially improved; and in a little more than fourteen per cent. of the males, and in nearly fourteen per cent. of the females, the disease was arrested. In a little more than thirty-two per cent. of the females, and in twenty-five and a half per cent. of the males, the disease was not arrested.

Viewing these results collectively, we find, in about sixty-three per cent., the symptoms improved; in eighteen per cent., the disease was arrested; and in nineteen per cent., it went on unchecked. When it is recollected that, of the whole number at this hospital, the disease was arrested in eighteen per cent. of the cases, the value of this remedy must be considered very great. Different qualities of oil were tried there, without exhibiting any marked difference in their remedial effects; but the offensiveness of some of the darker kinds rendered their general use impracticable. The oil now used is straw colored, transparent, and free from offensive smell. Patients in general take it without repugnance. The dose, at first, is one drachm, or a large tea-spoonful, three times a day, for an adult; but it should be gradually increased to one or two table spoonfuls for a dose. It is usually given in camphor water, or any aromatic water, or bitter infusion, or in milk. When the stomach is very irritable, it may be given in mucilage of gum, or slippery elm tea, with a few drops of hydrocyanic acid. In cases where there exists great anemia and debility, and in those where the effects of the oil seems slight, preparation of quinine, iron, or manganese, which is better, may be conjoined with advantage. When nausea and feverishness occur, the remedy should be omitted for a few days. In some cases the use of the oil may be continued, where there is slight spitting of blood, without producing any injurious effects. One of the most striking effects of the use of cod-liver oil, is an increase of the patient's weight. But an amelioration of the symptoms does not always follow the increase of weight; but these exceptions are rare. An aggravation of the symptoms, and a decrease of weight, are almost always coincidences. In some few cases, the symptoms may improve though the weight be not increased. But in most cases where the

symptoms abate, and the weight does not increase, or even diminish, the patient is apt to relapse, and progress rapidly to a fatal termination. Such cases do occur, and they should be noted, in order that a good remedy should not be hastily thrown aside, after sanguine hopes have been disappointed. On the other hand, without entering into the successive steps of improvement, in the patient, it will suffice to say, that "many of the cases included in the eighteen per cent., in whom the diseases were marked arrested," in the above account, "felt themselves as well as they had been before the attack of the disease."

From these facts, no other conclusion can be drawn, than that cod-liver oil possesses the property of controlling the symptoms of pulmonary consumption, if not arresting the disease, to a greater extent than any other agent hitherto tried, and bids fair to become the fashionable remedy for that as well as other diseases.

We give the following as the best remedy, to disguise its nauseous taste. Chew a piece of dried orange peel, before and after taking the oil.

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## NEW REMEDIES IN MATERIA MEDICA.

### COD-LIVER OIL.

COD-LIVER OIL has been used by *Dr. Brefield*, as a topical application in strumous diseases with great benefit. The German physicians award to it great merit. The diseases in which it is most beneficial are scrofulous affections of the neck, as in glandular tumors, or enlargements, ulcerations, &c. The following is the preparation found to be most beneficial.

*Recipe:* Cod-Liver Oil, fifteen parts.  
Yolk of Eggs, twelve parts.  
Extract of Lead, eight parts.

Form an ointment. This ointment is applied to the ulcers thinly spread upon lint. In scrofulous sore eyes, the eye lids are to be anointed several times a day with pure oil. In mesenteric diseases, the abdomen may be rubbed with the oil either warm or cold, as is most agreeable to the patient, three or four times a day, and continued till the enlargement of the abdomen subsides.

## A NEW REMEDY FOR SCALD HEAD.

This remedy removes the roots of the hair without pain, when the remedies prescribed in this book may be applied. This remedy is called the *sulpho-hydrate, of the sulphuret of calcium*. It is made in the following manner: by passing sulphuretted hydrogen to saturation, through a mixture of two parts of slaked lime, and three parts of water. The result is a jelly-like substance, of a blueish-green color. It is sufficient to apply a layer of this, of a line in thickness, to the parts to be denuded, when in the course of three minutes the hair will be entirely removed, without the least injury to the skin, and without causing the slightest pain. Then the usual remedies prescribed under the topic of scald head, may be successfully applied.

## ON PURGATIVES APPLIED TO THE SURFACE.

The endemic use of purgatives has been found very useful in those cases where long constipation has existed, and the stomach has become so irritated that medicines cannot be retained by the patient. The mode of applying it is this: draw a blister over the stomach, or on the inside of each thigh, and when the skin is loosened, remove it, and sprinkle the raw surface with colocynth finely powdered. In from four to six hours, the bowels will be freely evacuated. This remedy should not be persisted in for any length of time, as it is apt to irritate the bowels too much.

## A NEW REMEDY FOR ULCERATED PILES.

Chromic Acid. This is to be applied freely to the ulcerated piles. In about two days, a considerable slough will be thrown off, and the tumor will subside. This remedy gives but little pain.

## TER CHLORIDE OF GOLD IN RHEUMATIC AND GOUTY AFFECTIONS.

This substance, made into an ointment with lard, has been found to relieve rheumatic and gouty pains, with great facility. It tinges the skin purple, but this stain is readily removed by washing with urine.

## A NEW REMEDY FOR BALDNESS.

Take leaves of the Cherry laurel, sixty grains.

Cloves, eight grains.

Tincture of Lavender, one hundred and eighty grains.

Mix, and digest for six days. Then filter, and add fifteen grains of sulphuric acid. The bottle should be kept hermetically



sealed. The bald parts are to be rubbed daily. The effect will be perceptible in six or seven days. *A German Remedy.*

#### FOR THE STING OF A BEE.

The oil of tobacco, as found in the heel of a pipe, or the mouth end of a segar, applied, will relieve pain immediately, and prevent swelling; it removes poison in a few minutes.

#### OIL OF ANDA.

This is the product of the seeds of a plant, which is a native of Brazil. This remedy has been used very successfully by *Dr. Ure*. The average dose is *twenty drops*. Taken on a little sugar, it has no unpleasant taste. It operates mildly, but efficiently, in from one to two hours. It is one of our best remedies for habitual costiveness. It is gentle and safe. "*Braithwaite.*"

#### NITRATE OF SILVER.

To remove nitrate of silver stains from linen, wet the stain with the *bi chloride of mercury*, then wash it in cold water. This will remove the stain entirely.

#### CARBONATE OF MANGANESE.

This is a valuable tonic. In many cases it is preferable to iron, especially in those anemic conditions of the blood in chlorosis, and diseases of the lungs. The dose is from two to three pills a day, of two grains each.

#### SULPHATE OF MANGANESE.

The dose of this preparation is two grains three times a day, prepared after the following—

*Recipe:* Phosphate Manganese, one and a half drachms.

Peruvian Bark, half a drachm.

Syrup of Tulu, three ounces.

Syrup of Peruvian Bark, five ounces.

Essence of Lemon, one and a half drachms.

Powder of Tragacanth, ten grains.

This preparation must be made quickly, and preserved in a well stopped bottle. This may be divided into lozenges, each containing two grains of the manganese. Take one, three or four times a day.

#### COLLODION.

For bed sores, apply a piece of soft linen over the sore, and apply the collodion over it and its edges. This preserves and shields the sore from the friction of the bed.



## ANTIDOTE TO ARSENIC.

Calcined Magnesia. This should be given in drachm doses, in milk and water, and repeated every hour, till all the violent symptoms are removed; then once in three or four hours, for the next twenty-four hours. Light nourishment should be given, after the bowels are gently moved. This remedy has saved the patient, after sixty grains of arsenic had been taken through a mistake. First, give a puke, then the calcined magnesia as above directed.

## ANOTHER ANTIDOTE TO POISON.

Animal charcoal, prepared from the ivory black, or from blood, or old leather. This is chemically prepared by *chloro-hydric acid*. Remove all earthly and impure matters, by washing; then heat to redness in a covered crucible. It is said, by *Dr. B. H. Rand*, of Philadelphia, that this preparation is an antidote to opium, morphine, belladonna, aconite, nux vomica, delphinium, straversacre, white hellebore, digitalis, hemlock, tobacco, ilaterium, ipecacuanha, hydrocyanic acid, cantharides, and arsenic. The dose is from a drachm to half an ounce. It should be given immediately after the poison is swallowed, and repeated in a few minutes. The animal charcoal is innocent in itself, and easily taken in a little sweetened water, or milk and water. It is also an antidote to the poison of copper and lead. This, however, should not be given to the exclusion of the susqui peroxide of iron—in mineral poisons, especially arsenic—which is so easily prepared, and kept by all families. See Article, Antidote to Poisons, in this work.

## TREATMENT OF ULCERS.

The treatment of ulcers has been so simplified by the profession, that all that is necessary on this subject, may be said in a few lines. It was formerly the case that every variety of sores was treated in a different way, and it not unfrequently required months to effect a cure. The profession has reduced the treatment to a few simple remedies, which any one can apply with ease and certainty. It has been found that the great secret in curing old sores is to exclude the atmospheric air from the surface. *Dr. Newman* has happily given us a remedy, that is at once safe and simple, which answers this purpose. It is to cleanse the surface well with warm water, then sprinkle it over completely with very finely powdered charcoal. The matter insinuates itself between the fine grains of the charcoal, and forms a complete covering to the surface; it also

prevents gangrene or mortification. Over this a pledget of soft lint or old linen should be placed, which should be moistened occasionally with warm or cold water, as there may be too much heat or fever. If the sore has been of long standing, and the edges have spread out, they may be drawn together with adhesive straps, after the charcoal has been freely applied over the surface. If the edges of the sore are soft and pale, or flabby, half a grain of opium should be given to the patient—night and morning. This exercises a happy effect in restoring a healthy condition of the sore, and causes healthy granulations to spring up. The charcoal should be washed off, once in two days, or so much of it as can be easily removed, and fresh charcoal applied. The diet should be light, and the bowels kept open. This treatment will apply to almost all kinds of old sores and ulcerations, as well as recent ones. Scarcely any other remedies are used in Europe, for the treatment of old sores. Some have used water dressing entirely: keep the sore constantly covered with a wet cloth, till the granulations spring up, then draw it together with adhesive straps, and apply simple cerate over the surface to exclude the air; or the charcoal will answer well in this case. If the sore is in the form of a deep fissure or crack, be sure to insinuate the charcoal to the bottom, and once in a day or two, bathe it well with warm water; and whether the charcoal is all removed or not, cover it again with fresh powder. More can be done in as many days by this treatment, than can be effected in as many weeks, by the old mode of treating sores by poulticing and plastering, with so great a variety of ointments and detergents. Pure charcoal, and pure water with bandages, will give satisfaction to all who will give them a fair and candid trial, in any case of sores or ulcerations. We except burns; they should be painted completely over with white lead and linseed oil when first burnt, and kept completely covered till they heal. And this cure is upon the principle of complete exclusion of the atmospheric air. I have, in a few years past, seen the most astonishing cures performed by this remedy, in the most alarming cases of burns and scalds.

#### A NEW REMEDY TO PREVENT SMALL-POX FROM PITTING THE FACE.

As soon as the pocks begin to appear, take mercurial ointment, six parts, and flour or starch, two parts: mix them well, and cover the face completely, and keep it covered, till the pocks all fall off the body, elsewhere; then wash it off, and but few pits will be seen. The remedy gives ease and comfort to the patient, and no danger

accrues from it. This is a very valuable discovery for the preservation of the beauty of the ladies. Another—Keep the face well oiled with sweet oil, so as to exclude the air from the surface, or cover the face with collodion, and keep it so till the pocks fall off, then wash it off.

#### ERGOTINE—A NEW REMEDY FOR HEMORRHAGE.

*Doctor Bonjean*, of Chambery, has furnished the medical world with his experience of the use of this new remedy, in arresting bleeding from wounds, and also from the uterus. The substance of his remarks is as follows: Ergotine, when applied to wounds, has the property of facilitating their cicatrization, and moderating inflammation of the wounded tissues. Under its influence, union takes place by the first intention, and cicatrization occurs without further assistance. In certain cases, ergotine may perform all the offices of the ligature. As—first—when, in order to arrest a hemorrhage, it would be necessary to disturb the lips of a wound in which cicatrization is commencing. Second: when the wound manifests a tendency to gangrene of the cut surface. Third: when the source of the hemorrhage is from vessels imbedded in the inflamed and swollen tissues. Fourth: when the blood flows from many small arteries, of which the orifices cannot be perceived. Fifth: when hemorrhage occurs from the sloughing of an eschar, as in gun-shot wounds, &c. In these difficulties, the use of ergotine is as often useful, as pressure is ineffectual. The application of ergotine supersedes ligature of the arteries, and effects cicatrization, without interfering with the permeability of the artery. The mode of applying ergotine, is to dissolve it in five or six times its weight of water, for ordinary wounds; and in three or four parts, or even in a concentrated form, for more serious hemorrhage. A portion of tow or lint, is to be moistened with the fluid, and applied with gentle pressure to the surface, previously wiped. When the hemorrhage does not return, on the pressure being removed, another pledget, moistened with the solution, is to be laid over the former, and the limb bandaged as usual. Perfect rest must be observed by the patient.

#### KOUSSO.—A NEW REMEDY FOR TAPE WORMS.

The flowers are given in a strong tea, till they purge freely; they are taken on an empty stomach. Happy effects have been produced by this remedy, both in France and England.

## A NEW MODE OF STOPPING HEMORRHAGE.

When a tooth is extracted, and the blood flows freely, and is not arrested by the usual remedies, apply the following. Take of

*Recipe:* Gutta Percha, one ounce.  
Stockholm Tar, one and a half ounces.  
Creosote, one drachm.  
Gum Shellac, one ounce.

Boil these articles together in a small crucible, or some suitable vessel, and constantly stir or beat them till the ingredients are perfectly blended into a stiff homogeneous mass. This mass can be rendered quite soft by working it with the fingers; you then can mould it into any shape you choose, so as to fit the wound, or holes made by the fangs of the teeth; press it firmly into the hole in the jaw bone, and let it remain there for twenty-four hours, when it may be removed. It will stop the hemorrhage. The mass will be hard, and show the shape of the cavity. Leech bites, or small wounds of any kind, may have their bleeding arrested in this way.

## TO REMOVE NEVUS.

These are tumors that sometimes exist at birth, and sometimes arise after the child is born. They are mostly situated on the head, face, or neck; but may make their appearance on any part of the body. They are generally red, or of the color of a ripe cherry. To remove them apply collodion, or gun cotton dissolved in ether, over the surface, till it is completely covered, so as to exclude the air. Reapply it once a week, till the tumor disappears. From one to six or eight weeks will in most cases remove the tumor entirely. No danger in it.

## NEW CURE FOR THE ITCH, OR SCABIES.

Cover the eruption completely with lard, and then cover the part with oiled silk. Reapply the lard twice a day. In a few days the disease will be cured.

## TO PREVENT THE SPREADING OF SCARLATINA.

*Dr. Webster* says, "Patients affected with scarlet fever should be—in the early, and inflammatory stage of the disease—sponged freely with tepid vinegar and water." He states, that he has great confidence in the efficacy of this means, in preventing the spread of the disease; he gives several cases in illustration of this opinion.—*London Journal* for 1849.



## NEW MODE OF TREATING HEMORRHAGE FROM THE STOMACH.

Give the oil of turpentine in small doses ; say, thirty drops every fifteen minutes, and gallic acid in half grain doses every half hour. The former stimulates the coats of the stomach, and the latter contracts the mouths of the blood vessels, and shuts them up. The diet, in all cases of hemorrhage from the stomach and bowels, must be absolute. All nourishment should be given in a concentrated, and liquid form ; perfectly cold, and in very small quantities at a time ; and a return to the ordinary diet should be permitted with the utmost caution.—Dublin Journal, 1850.

NEW REMEDY FOR CONSUMPTION AND SCROFULA, COMBINED WITH  
DYSPEPSY.

This remedy has been published by an eminent physician in the South. It consists in the combined use of phosphate of lime and cod-liver oil. For a child of ten or twelve years old, give twelve grains of the phosphate of lime, three times a day, and so increase or diminish the dose according to age. For a grown person, from twenty to twenty-five grains may be taken three times a day, and the cod-liver oil, at the intermediate times, between the doses of the lime. The oil is taken in the usual doses. (See chapter on Cod-liver Oil.) The phosphate of lime should be used ten or twelve days, then omitted five or six days before it is taken again. The diet should be generous, and easily digested.

TETANUS, OR LOCKJAW, CURED BY THE DESTRUCTION OF THE  
CICATRIX, OR SCAR, BY A RED HOT IRON.

A robust youth, aged twenty-two years, was seized with trismus, or lockjaw, on the ninth day after the receipt of a wound on the temple, when it had almost healed. He experienced a painful constriction of the chest, followed by reiterated convulsions, and suppression of urine, delirium, and unconsciousness followed.

All other tried means had failed to abate the severity of the disease. *M. Remy*, on the seventh day of the attack, applied *Larrey's* treatment, namely, cauterizing the scar in its whole extent with an iron heated to a white heat. The symptoms immediately underwent a great improvement : the convulsive movements became less frequent, and soon ceased entirely ; consciousness returned, and the urinary excretion reappeared ; but the muscular rigidity continued, the slightest movement, or attempt at swallowing of



fluids, produced a sense of suffocation ; the recumbent posture had become impossible, and the patient exclaimed against a breath of air. This condition, which lasted from four to five days, disappeared under the use of *digitalis*, in large doses. In fifteen days more convalescence was complete.—*Medical Gazette*, September, 1849.

#### A NEW METHOD OF MAKING ISSUES.

This is performed by galvanism, in the following manner : Take a piece of perforated zinc, fasten or rivet it to a sixpence, shilling, or half crown, according to the size you want the issue. Place this on the spot where the issue is to be made, with the zinc surface next to the skin, and cover it with a piece of spongio-piline moistened with salt and water. Moisten the spongio-piline with salt and water every twelve hours. An eschar will be thus formed in about twelve days. Or, if the cuticle be removed before applying the little battery, the slough will be formed, in from four to six days ; but this is more painful than when the cuticle is not previously removed.

#### VOMITING REGARDED AS ANTAGONISTIC TO SYNCOPE.

Any cause capable of so lowering the force of the circulation as to determine fainting, can also produce vomiting. If a strong man lose blood to such an extent as to induce fainting, he will in all probability have a seizure of vomiting. Should this occur during incipient fainting, he will not swoon ; if he have completely swooned, we may calculate on reaction on the occurrence of vomiting. Thus, then, from so direct a source of enfeebled circulation as the sudden abstraction of blood from a healthy man, whose stomach or system contains nothing deleterious, we may confidently rely upon the production of vomiting. The phenomena of sea sickness probably consists of a series of attacks of syncope, followed by a series of reactions. The fact, that fainting is produced by a swinging motion, on the generality of persons, is undoubted, and the relief afforded to that condition, by the full and active effects of retching, is equally certain ; but as the agitation of the ship continues, these phenomena continue to hold their alternate course, until the rocking of the vessel is discontinued, or the system ceases to be affected by it, as the author has experienced in his own case. It is highly probable, that the action of many of the class of emetics, and also of some poisons, owe their emetic

effects simply to their influence in depressing the heart's action, and not to any direct effect upon the stomach itself, as tobacco, lobelia, and many others. When any severe shock has been sustained by mechanical injury, if vomiting occurs, it is to be regarded as evidence of reaction from a state of more or less syncope which has resulted from it. If we study the countenance of a person in a state of syncope, and also during vomiting, we shall find that the two conditions are exactly opposite. In fainting, the countenance is completely blanched; while in vomiting, the capillaries are intensely injected, even to those of the white of the eye. Whatever may be the powerful effects of medicines in curing insidious diseases, in syncope they are peculiarly inert, compared with the influence of measures suggested by the physical laws. Thus, the horizontal posture is by far more restorative, than any of the articles of the MATERIA MEDICA. In examining the mechanism of energetic vomiting, we have only to regard the powerful contractions of the diaphragm and abdominal muscles, in order to understand its effect on the circulation; direct pressure on elastic tubes containing a fluid being obviously the most immediate way of emptying them. Nor should it be forgotten that the blood varies in its fluidity, in proportion to the force of the circulation; thus rendering mechanical action the more important. If, then, in severe injuries there be no vomiting, the danger is the greater; but, if free vomiting follow, you may expect a favorable reaction to succeed it, and, if the appropriate remedies be applied, the patient will recover.

#### NEW CAUSTIC.

*M. Velpeau* says, that sulphuric acid with saffron forms an additional caustic. The powerful cauterizing effects of the acid are not destroyed, but by the combination a black paste is formed, which hardens into a crust, shortly after exposure to the air. The peculiar properties of this caustic are its combining great power with facility of circumscribing its action, and it is stated, also, that the eschar thus formed, though deep, is quickly thrown off. In cancerous affections, the peculiar and distinguishing fetid odor is quickly destroyed, nor does any bad effect indicating its absorption arise during its use. It may be spread on a piece of soft linen, just large enough to cover the sore, and applied till it kills the surface then remove it, and dress with simple cerate.

THE REUNION OF FINGERS OR TOES, OR PIECES OF MUSCLE  
SMOOTHLY CUT FROM THEIR POSITION.

In all such cases, if the part cut off be a finger or toe, or any piece of flesh, if it is rendered foul or dirty, wash it clean with warm water, and reapply it to its position, exactly—if it is not soiled, apply it to its position without washing. After it is exactly adjusted, cover the edges freely and fully with collodion, and then with adhesive straps, so as to exclude the air completely from the wound—let this dressing remain till the wound heals, then remove it. If any portion of the collodion should be removed by any means, immediately reapply it over the whole denuded surface.

THE PRESERVATION OF SIGHT.

THE minuteness and inconceivable velocity of the rays of light, the facility with which they penetrate bodies of the greatest density, and closest texture, without a change of their original properties, make them the source of the most wonderful and astonishing phenomena, in the physical world. The smallest conceivable stream of light is called a ray. The sun is, perhaps, the original and great source of light. But light is produced by chemical preparations and decompositions. Light is not uniform in respect to color. Every part of a ray is not capable of exciting the idea of whiteness. White light is composed of different kinds of rays, which, individually, give the sensation, of red, orange, yellow, green, blue, Indigo, and violet, or purple. Besides these, there are invisible rays giving heat—but no light. These are less refractable than the colored rays.

It is by the judicious use of the rays of light and heat that we preserve the eye-sight. When we recollect that the eye is a very tender and irritable organ, composed of so many sensitive coats, it is a matter of surprise, that it should remain perfect so long—seeing that it is used on all occasions, in all degrees of light and shade, exposed to every variety of stimulus. Any thing that will act as a violent stimulus upon the eye, either light, heat, or too great fullness of the blood vessels of that organ, will, if long continued, injure the power of vision. Hence, looking directly at the sun, or on red-hot molten metal, or receiving the reflected rays from the surface of a white body, will injure the sight. It is important, that the humors of the eye be preserved in their due

proportions. Hence, the eye should not be rubbed with the finger immediately on its front; but should be pressed from each angle towards the centre. By pressing the ball of the eye in this way, the aqueous humor is preserved perfect, and in due quantity, and the globular shape of the eye is also preserved; so that the focus is formed at the proper distance from the eye. The manner in which the eye is used, tends greatly to preserve the sight. We should accustom ourselves to look at objects at a great distance; this causes the muscles of the eye to contract, and press the ball forward, and preserve the globular form of the eye. When reading or writing by a strong light, we should always sit in a position to throw the rays obliquely from the eye, and not directly into the eye. It is proper to soften the rays of light, by using a blue shade over the blaze. Blue is greatly preferable to green, or any other color.

We have said, too great fullness of the blood vessels of the eye injures it; and as study invites an increased action of blood to the brain, if you read or study much after night, the supper should be light, and the digestion kept free and easy. We have said, that there are rays of heat that emit no light: by long watching, or reading, these rays cause great stimulus to the eyes. Mr. W. B. Payne, of *London*, has invented what he calls an eye fountain; it is in shape like a small vase, with a small air-pump attached to it; so that a very small jet of cold water may be constantly applied against the eyes, for some time. The German oculists have, for a long time, used a similar instrument for the application of cold water to the eyes; it strengthens them very much.

In a conversation with a gentleman, on this subject, of much sound philosophical knowledge, he informed me, that, after long watching, or reading, when his eyes pained him, and the vision became weakened, he would lie down on his back, place a wet cloth over his eye-lids, and then cover the eyes with pounded ice, or with snow, and retain it there for an hour. It would, at first, for some minutes, produce pain; but, after this was over, a pleasant sensation ensued. By this means he has preserved his eye-sight, so that he has not required the use of glasses; when, if he had not used this remedy, he no doubt would have been obliged to use them years ago. This proves the truth of the declaration, that the rays of heat accumulate in the eye by long watching, or reading; and if the heat be not abstracted, they, by



their stimulus, cause the vessels of the eye to absorb the humors, and thereby alter or change the axis of vision, and make the demand for glasses necessary, in order to restore the proper focus. All foreign bodies that may become insinuated under the eye-lids, should be carefully removed as quick as possible. To avoid dust falling into the eyes, we should not sleep on the back. Frequently applying cold water to the head strengthens the eyes. Light suppers and healthy digestion is important to the healthy functions of the eyes.

#### HUMAN SYSTEM.

A perfect human system is composed of *two hundred and sixty bones*, more than *four hundred muscles*, and *thirty-two teeth*. The bones are supplied with periosteum, tendons, ligaments, synovial membranes, arteries, veins, and absorbents. The principal components of the bones are phosphate of lime and gelatin. The muscles are composed of muscular fibre, and fibrils, fascia, and tendons. To every muscle belongs arteries, veins, and absorbents, sentient and motary nerves; there is not a fibre that is not supplied with them all. The skin is mostly composed of the extremities of the nervous system. The brain and spinal marrow are the great sensorium, and origin of the nervous system; all sensation is conveyed through the nerves to the brain; and the mind takes cognizance of the action or injury, and the man experiences pleasure or pain. The eye is composed of six coats, and three humors—First, the tunica albuginea, cornea, sclerotica, pigmentum nigrum, retina, and arachnoidea. Second, the aqueous and vitreous humors, and the chrystaline lens: the expansion of the optic nerve, makes the retina, then we have the iris, and ciliary bands and procresses. Besides these, there are the vicera, heart, lungs, stomach, liver, spleen, pancreatic gland, bowels, kidneys, bladder, and all their secreting and excreting glands, ducts and vessels. Strange that a machine so complicated should keep in tune so long. Take good care of it, if you would live long.





# BRIGHT'S FAMILY PRACTICE.

## A PLAIN SYSTEM OF MEDICAL PRACTICE, FOR THE USE OF FAMILIES.

By J. W. BRIGHT, M.D.

THIS work embraces all the diseases of MEN, WOMEN, and CHILDREN, and a plain system of MIDWIFERY; and contains the experience of the Author, in more than thirty years extensive practice of Medicine, and is the only work now before the public which contains all the New and Approved Remedies, found in the standard works and medical periodicals in Europe and America, together with the experience and approved practice of the best authors, upon which the successful treatment of the present forms of disease so much depends. It is the only work now before the public, containing a full description of the new, as well as the old diseases of the United States. The Symptoms of each disease, in all its stages, are so minutely described, and the directions for giving and working off the medicines are so plain, that no one can fail to follow them; the remedies all being put down in plain English, in their appropriate places. It also contains a *Family Materia Medica*, with Receipts for preparing all the Family Medicines in common use, with directions how to use them, and about thirty plates, mostly of medicinal plants, with their description, medical properties, and uses. Recipes for preparing Tooth Powders, Cologne Waters, and Medicines for Cleansing and Beautifying the Skin, and many other recipes, useful to Farmers and Mechanics: recipes for preparing and using the remedies for the cure of the Poisons of Arsenic, Copper, Lead, Mercury, Opium, Morphine, Gallic and Prussic Acids; also, directions for preparing a variety of Diet for the Sick. The work is got up in the most fashionable style, with marble edges, and bound in fine leather, with spring back, especially for the use of families. The whole is contained in 941 royal octavo pages, and will be delivered to subscribers at *Five Dollars* per copy.

### Recommendations from the Medical Faculty of the University of Louisville.

LOUISVILLE, August, 1847.

Dear Sir—Having bestowed on an attentive examination of your "FAMILY PRACTICE" all the leisure I can command, I am of the opinion that, with the addition of the word *WELL*, which I shall take the liberty of making, I cannot better characterize it than you yourself have done, in your very modest and appropriate title-page, "A Plain System of Medical Practice, *WELL* adapted to the use of Families."

The work appears to me to be thus adapted, for the following reasons:—

1. The matter it contains is sound and judicious, and sufficiently full and diversified for all the cases of disease in which families themselves should attempt to employ it. When more is needed, recourse should be had to professional aid.

2. The descriptions of diseases are generally correct, and their changes and stages well marked; and the style of the work is so simple and perspicuous, that no one at all acquainted with the English composition can misapprehend its meaning.

3. The compass of the work, embracing as it does every form of disease which an American Physician, in full practice, can expect to encounter in a lifetime, is sufficiently ample.

Wishing it, therefore, the reception and circulation, to which it appears to me to be entitled, I am, very respectfully, your obedient servant,

CH. CALDWELL, M.D.,

Professor of the Institutes of Medicine and Medical Jurisprudence.

P. S. Were it not that comparisons are apt to be held exceptionable, I would not hesitate to say, that I consider your "FAMILY PRACTICE" the most valuable work of the sort of which I have any knowledge.

C. C.

# BRIGHT'S FAMILY PRACTICE.

I have examined Dr. Bright's "FAMILY PRACTICE," and feel assured that it is, on the whole, well adapted to the purpose for which it is written. I think the work is calculated to be eminently useful.  
August, 1847. S. D. GROSS, M. D., Professor of Surgery.

I concur in the estimate expressed above by Dr. Gross.

H. MILLER, M. D.,  
Professor of Obstetrics and Diseases of Women and Children.

I have examined "BRIGHT'S FAMILY PRACTICE" with some care, and find that it is plainly written, and contains much that is valuable. I believe the work is calculated to do much good.  
J. COBB, M. D., Professor of Anatomy.

I have examined Dr. Bright's "FAMILY PRACTICE," and find it what it purports to be—a plain system of Medical Practice—which I can conscientiously recommend to families.  
L. P. YANDELL, M. D., Professor of Physiology.

## From Practising Physicians in Louisville.

I have examined with care Dr. Bright's "FAMILY PRACTICE," and find it a valuable work, well suited to the use of Planters and Families. It is plain and comprehensive, and the treatment conformable to the latest and most approved practice, and it affords me much pleasure to recommend it to the public.  
J. C. GUNN, M. D.

I have examined "BRIGHT'S FAMILY PRACTICE." The work is not only the result of long experience, but a very judicious selection of the latest and most approved Medical authors, and will, no doubt, be of great service to families.  
W. C. GALT, M. D.

I have examined "BRIGHT'S FAMILY PRACTICE," and do most unhesitatingly recommend it as a plain, practical work—useful to families.  
C. PIRTLE, M. D.

I have examined "BRIGHT'S FAMILY PRACTICE," and take great pleasure in recommending it as a valuable work, suitable to the use of Families. Having practised Medicine fifteen years in Mississippi and Louisiana, I view this work as better adapted to the diseases of that region than any work of the kind I have ever seen.  
RICHARD ANGEL, M. D.

We have examined Dr. Bright's "FAMILY PRACTICE," and feel no hesitation in recommending it to the public, as a book containing a variety of useful and valuable information. It is entirely practical in its designs; all technicalities are avoided, so as to render the author's meaning clear and plain to the unprofessional reader, for whom it is more particularly intended than for the profession, though the latter, and particularly the medical student, might increase his store of practical knowledge by a careful perusal of its pages. Dr. Bright's instruments for the application of caustic to the mouth of the uterus are ingenious, and no doubt will save the practitioner much trouble, and the patient a great deal of unnecessary pain.  
Louisville, June, 1847. U. E. EWING, M. D.  
W. T. H. WINLOCK, M. D.

I have examined "BRIGHT'S FAMILY PRACTICE," and find in it plain and important practical principles in medicine, well adapted to the use of families.  
WM. A. McDOWELL, M. D.

I have examined "BRIGHT'S FAMILY PRACTICE," and take pleasure in recommending it to all persons as a valuable work—in particular to families in the country.  
Louisville, June, 1847. J. W. KNIGHT, M. D.

We have examined the medical work written by J. W. Bright, and take pleasure in recommending it to the public, as a work well calculated for the use of families.  
Louisville, June 18, 1847. JOHN M. TALBOT, M. D.  
W. H. WAKEFIELD, M. D.

DR. BRIGHT: Dear Sir—I have looked into your work at such moments as my urgent labors for the season would afford me. It appears to be a work of great research, and is doubtless one of high merit. It is my wish that the reading public may be most thoroughly satisfied of the high appreciation put upon it.  
Lexington, Ky., Feb. 5, 1848. B. W. DUDLEY, M. D.,  
Prof. of Surgery in Transylvania University.

# BRIGHT'S FAMILY PRACTICE.

## From Physicians in Memphis.

After a careful examination of Dr. Bright's "FAMILY PRACTICE," I have no hesitation in saying, that the practical precepts recommended by the Author are better adapted to the treatment of disease, as it prevails at the Southwest, than any other work of a similar character, with which I am acquainted. GEO. R. GRANT, M. D.,

Professor of Theory and Practice of Medicine in the Memphis Medical College.

From the cursory examination which I have been enabled to make of Dr. Bright's work on the Practice of Physic, I have no hesitation in saying, that it is the best production of its kind now published. E. F. WATKINS, M. D.

Memphis, Sept. 1, 1847.

We have examined Dr. Bright's "PLAIN SYSTEM OF MEDICAL PRACTICE," and are satisfied that it is better calculated for a safe guide to Families—especially those remote from a scientific physician—than any other work on Domestic Practice. We can therefore cheerfully recommend it as a plain and valuable work; in the main, well adapted to the purposes designed. LEWIS SHANKS, M. D.

Memphis, Sept. 1, 1847.

JNO. B. FRAYSER, M. D.

## From Physicians in Illinois.

Having been requested to examine "BRIGHT'S FAMILY PRACTICE," I have satisfied myself that it is superior to any work of the kind which has met my notice, both in its description of diseases and principles of treatment. HENRY WING, M. D.,

March 6, 1848.


Prof. of Mat. Med., in Jacksonville Med. Coll., Ill.

TO THE PUBLIC.—Having examined Dr. Bright's "FAMILY PRACTICE OF MEDICINE" attentively, I have no hesitation in stating, that it is the best work of the kind now extant, in the English language, and is admirably adapted to the wants of western people. LEXINGTON, MORGAN CO., ILL., March 8, 1848.


C. H. KNIGHT, M. D.

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